

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.)

SW4 of Sec. 13, T2N, R68W

Total Acres in Described Lease: 160 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: 724 Feet
 Building Unit: 724 Feet
 High Occupancy Building Unit: 4845 Feet
 Designated Outside Activity Area: 5280 Feet
 Public Road: 372 Feet
 Above Ground Utility: 450 Feet
 Railroad: 5280 Feet
 Property Line: 388 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: 09/05/2014

Date of Rule 305.a.(2) Buffer Zone Notification to Building Unit Owners: 08/07/2014

SPACING and UNIT INFORMATION

Distance from Completed Portion of Wellbore to Nearest Wellbore Permitted or Completed in the same formation: 610 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

Codell: Proposed Spacing Unit is described as the W2SW of Sec. 13;E2SE of Sec. 14; E2NE & NESE of Sec. 23; W2NW & NWSW of Sec. 24.

OBJECTIVE FORMATIONS

Objective Formation(s)	Formation Code	Spacing Order Number(s)	Unit Acreage Assigned to Well	Unit Configuration (N/2, SE/4, etc.)
CODELL	CODL		400	GWA

DRILLING PROGRAM

Proposed Total Measured Depth: 12209 Feet

Distance to nearest permitted or existing wellbore penetrating objective formation: 610 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? 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 318A

DRILLING WASTE MANAGEMENT PROGRAM

Drilling Fluids Disposal: OFFSITE Drilling Fluids Disposal Methods: Commercial Disposal
 Cuttings Disposal: OFFSITE Cuttings Disposal Method: Other
 Other Disposal Description:

Cuttings will be disposed of by land spreading.
 Extraction Windsor Land Application COGCC Facility 433752 will be used for offsite disposal.

Beneficial reuse or land application plan submitted? Yes
 Reuse Facility ID: 433752 or Document Number:

CASING PROGRAM

<u>Casing Type</u>	<u>Size of Hole</u>	<u>Size of Casing</u>	<u>Wt/Ft</u>	<u>Csg/Liner Top</u>	<u>Setting Depth</u>	<u>Sacks Cmt</u>	<u>Cmt Btm</u>	<u>Cmt Top</u>
CONDUCTOR	26	16+1/4	42	0	80	100	80	0
SURF	13+1/2	9+5/8	36	0	850	500	850	0
1ST	8+3/4	7	26	0	7800	850	7800	0
1ST LINER	6+1/8	4+1/2	13.5	7700	12209			

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

Letter to Director for COGCC Rule 318A.e. Proposed Spacing Unit, attached as Proposed Spacing Unit.

Letter to the Director for COGCC Rules 318A.a. Exception Location for GWA Windows, attached as the Exception Location Request.

Waiver for COGCC Rule 318A.a. is highlighted in the Surface Use Agreement, attached as Surface Agrmt/Surety.

Distance to nearest wellbore permitted or completed in the same formation is Johnson Trust 7.
Nearest permitted or existing wellbore penetrating formation is Johnson Trust 7.

Extraction is aware that this falls within Town of Frederick city limits and will be applying for a Town of Frederick Special Use Permit (SUP).

This application is in a Comprehensive Drilling Plan _____ 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: Jennifer Grosshans

Title: Regulatory Analyst Date: 10/20/2014 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: 10/21/2015

Expiration Date: 10/20/2017

API NUMBER

05 123 42313 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>
	<p>1) Submit Form 42 electronically to COGCC 48 hours prior to MIRU.</p> <p>2) Comply with Rule 317.j and provide cement coverage from end of 7" casing to a minimum of 200' above Niobrara and from 200' below the Shannon to 200' above Sussex. Verify coverage with cement bond log.</p> <p>3) Comply with Rule 321. Run and submit Directional Survey from TD to base of surface casing. Ensure that the wellbore complies with setback requirements in commission orders or rules prior to producing the well.</p>
	<p>Operator acknowledges the proximity of the listed non-operated wells. Operator agrees to provide mitigation Option 1 or 2 (per the DJ Basin Horizontal Offset Policy), ensure all applicable documentation is submitted, and submit Form 42(s) ("OFFSET MITIGATION COMPLETED") for the remediated wells, 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.</p> <p>Johnson-Niven 1-13J (API 123-09952)</p>
	<p>Attached Amended SUA. Per operator changed The Minerals beneath this Oil & Gas location be developed from No to Yes. Permitting Review Complete.</p>

Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
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. Traffic will be routed to minimize local interruption.</p>
4	General Housekeeping	<p>Visual Impacts: Equipment, regardless of construction date, which are observable from any public highway shall be painted with uniform, non-contrasting, non-reflective color tones (similar to the Munsell Soil Color Coding System), and with colors matched to, but slightly darker than, the surrounding landscape.</p> <p>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. Operator shall keep the Surface Use Area as well as any roads or other areas used by Operator safe and in good order, including control of noxious weeds litter and debris.</p>
5	Storm Water/Erosion Control	<p>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).</p>

6	Material Handling and Spill Prevention	<p>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.</p> <p>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.</p> <p>Operator shall comply with state and federal laws, rules and regulations governing the presence of any petroleum products, toxic or hazardous chemicals or wastes on the Subject lands.</p>
7	Dust control	<p>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.</p>
8	Construction	<p>Guy line anchors: All guy line anchors shall be brightly marked pursuant to Rule 604.c. (2)Q.</p>
9	Noise mitigation	<p>Sound walls and/or hay bales may be used to shield sensitive areas during drilling operations should noise be of concern to Building Unit owner(s).</p> <p>Sound walls will be used to surround the generators during drilling operations to shield sensitive areas.</p> <p>Additional Sound mitigation measures will be considered and implemented pursuant to third party recommendations.</p>
10	Emissions mitigation	<p>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. In the anticipated absence of a viable gas sales line, the flowback gas shall be thermally oxidized in an emissions control device (ECD), which will be installed and kept in operable condition for least the first 90-days of production pursuant to CDPHE rules. This 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.</p>
11	Odor mitigation	<p>Equipment shall be operated in such a manner that odors and dust do not constitute a nuisance or hazard to public welfare.</p> <p>Oil and gas operations shall be in compliance with the Department of Public Health and Environment, Air Quality Control Commission, Regulation No. 2 Odor Emission, 5 C.C.R. 1001-4, Regulation No. 3 (5 C.C.R. 1001-5), and Regulation No. 7 Section XVII.B.1 (a-c) and Section XII.</p>
12	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>
13	Interim Reclamation	<p>Operator shall be responsible for segregating the topsoil, backfilling, repacking, reseeding, and recontouring 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.</p>

14	Final Reclamation	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.
15	Drilling/Completion Operations	One of the first wells drilled on the pad will be logged with Open Hole Resistivity Log and Gamma Ray Log from the kick-off point to 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 open-hole logs were run.

Total: 15 comment(s)

Applicable Policies and Notices to Operators

Notice Concerning Operating Requirements for Wildlife Protection.

Policy for Bradenhead Monitoring During Hydraulic Fracturing Treatments in the Greater Wattenberg Area.

Attachment Check List

Att Doc Num	Name
1696544	SURFACE AGRMT/SURETY
1696546	SURFACE AGRMT/SURETY
400689178	FORM 2 SUBMITTED
400712426	OffsetWellEvaluations Data
400712439	DIRECTIONAL DATA
400712447	DEVIATED DRILLING PLAN
400712450	WELL LOCATION PLAT
400744611	PROPOSED SPACING UNIT
400807047	EXCEPTION LOC REQUEST

Total Attach: 9 Files

General Comments

User Group	Comment	Comment Date
Permit	Added the Open Hole Logging BMP to a separate tab. Final Review Completed.	10/20/2015 9:44:01 AM
Engineer	Offset wells evaluated.	4/28/2015 3:32:51 PM
Permit	ON HOLD: Requesting Missing Heading and land description for Amended SUA. Requesting change to Minerals beneath this Oil & Gas location be developed.	4/27/2015 9:10:30 AM
Permit	ON HOLD: Requesting corrected SUA. Missing Heading and land description. Requesting corrected Open Hole Logging BMP.	4/14/2015 2:52:56 PM
Permit	Waiver for COGCC Rule 318A.a. is highlighted in the Surface Use Agreement, attached as Surface Agrmt/Surety.	4/14/2015 2:52:55 PM
Public	<p>As a resident that will be directly to the South, I have several concerns with the proposed Johnson Trust multi-well facility:</p> <p>1) Proximity. Its simply too close. There are far more options on that parcel of land that would impact far less people. A recent change to section 604.c.(2)E.i of the COGCC regulations clearly states, Multi-well production facilities shall be located as far as possible from Building Units.What has been proposed is clearly not in compliance. In fact, form #400798759 submitted by Extraction, titled, Siting</p>	3/30/2015 2:30:49 PM

	<p>Rationale basically admits as much. Their Option 3 clearly states that the facility can be moved, but would present an economic burden to have to run pipelines over a quarter-mile away. Frankly, this isnt my problem, its theirs. Thats the cost of doing business in urban areas.</p> <p>2) Traffic. Again, having the opportunity to sit on my back porch and watch the Encana operations over the past 8 months, I can not emphasize enough how busy the in/out traffic is. Its pretty incredible, really. Id conservatively guess that there have been several thousand truck deliveries (tankers, pickups, etc). However, its been tolerable, as they have access from the I-25 frontage road from the West and are over 1500 feet from our community. In other words, they dont drive by our neighborhoods and are at a distance in which the impact to residents is minimal. That simply wont be the case with this proposal, as the proposed access road is directly off of Birch/CR-11 (AND LESS THAN 100 YARDS AWAY FROM THEIR OTHER PROPOSED BYBEE FACILITY). The same road that runs directly behind the Stoneridge community. Two access roads for mutli-well facilities that close is just absurd. The traffic will be a MAJOR problem. At best, the access road should come from the South side of the property (off Bella Rosa/Pine Cone) near the abandoned farm house, NOT off of Birch/CR-11. This would also go hand in hand with moving the entire production as far south as possible. Pretty simple solution in my opinion.</p> <p>3) Noise. As a resident that backs up to the 3 eight-well pads that Encana is currently operating, the noise is real. As in really bad. We recently had a noise study that was conducted at our house, which showed the pads are consistently over the c-level limit. And thats from a distance of over 1500 ft! Far less than the 500 that is being proposed. We run 2 fans in our bedroom at night and are still drowned out at times by the constant roar of the operations. Only way I can describe it is having a jet aircraft hovering over your house at all times. My wife has about had it, especially with an 8-month old! I understand that noise is to be made, and I also understand that Extraction is not Encana, but its rather obvious that noise is going to be a huge issue.</p> <p>4) Aesthetics. Theres no way around this one. To put it kindly, these operations (even when complete) are ugly. And the closer to our community that this thing goes, the worse off our values become. No one wants this thing in their back yard, as shown by the number of neighbors that have sold or are currently selling. Were talking 16+ giant holding tanks and batteries plus who knows how many separators at only a few hundred feet away!! It will have a very real effect on property values. It will also have a major impact on the values of future residential development on the site. At the community meeting, I heard the idea of berms/walls/landscaping, etc being thrown around. Great! Im all for that. The problem is that all of those houses that will back up to that facility have walk-outs on the backside. In other words, our viewing perspective is much higher than normal and well be looking straight down on these things. The berm would have to be twice as high as normal to have a useful impact.....unless the operation is moved much further south. The viewing angle dramatically shrinks the farther the operation is from our houses....as does the noise...as does the traffic.</p> <p>The bottom line is that the location being proposed is not suited for a multi-well facility. I again reference the regulation from above, Multi-well production facilities shall be located as far as possible from Building Units.</p> <p>I ask that you do all that you can to minimize the impact to our community, and especially to those that will be directly impacted, such as myself and others on Rangeview Ave.</p> <p>Thank You</p>		
Permit	The comment period for Extraction's Johnson Trust 9 form 2's and form 2A in Section 13 T2N R68W has been extended by Town of Frederick LGD request from ending 3/30 and 4/1 to ending 4/21/2015.	3/30/2015 9:52:36 AM	
Permit	Passed completeness.	3/10/2015 2:54:24 PM	

Permit	Exception location request does not meet guidelines. Return to draft.	3/10/2015 1:05:55 PM
Permit	Returned to draft as per operator's request.	10/20/2014 3:51:16 PM

Total: 10 comment(s)