

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.)

E/2 Sec. 12-T1S-R68W

Total Acres in Described Lease: 320 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: 460 Feet

CULTURAL DISTANCE INFORMATION

Distance to nearest:

Building: 330 Feet

Building Unit: 435 Feet

High Occupancy Building Unit: 3235 Feet

Designated Outside Activity Area: 5280 Feet

Public Road: 530 Feet

Above Ground Utility: 216 Feet

Railroad: 1435 Feet

Property Line: 158 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: _____

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: 135 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

Proposed Spacing Unit: E/2E/2 of Section 12, T1S, R68W

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 | | 160 | GWA |

DRILLING PROGRAM

Proposed Total Measured Depth: 12479 Feet

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

135 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: Commercial Disposal

Other Disposal Description:

Beneficial reuse or land application plan submitted?

Reuse Facility ID: or Document Number:

CASING PROGRAM

| Casing Type | Size of Hole | Size of Casing | Wt/Ft | Csg/Liner Top | Setting Depth | Sacks Cmt | Cmt Btm | Cmt Top |
|-------------|--------------|----------------|-------|---------------|---------------|-----------|---------|---------|
| SURF | 13+1/2 | 9+5/8 | 36 | 0 | 1250 | 687 | 1250 | 0 |
| 1ST | 8+3/4 | 7 | 29 | 0 | 8140 | 805 | 8140 | 3000 |
| 1ST LINER | 6+1/8 | 4+1/2 | 13.5 | 7165 | 12479 | | | |

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 Operator is the only owner as defined in C.R.S. §34-60-103(7) within the proposed spacing unit and waives notification and 30-day Rule 318A.e(6). A document that waives the 30 day notification is attached to Proposed Spacing Unit Map. Operator respectfully requests a Rule 318A.c, 603.a.(2), and 604.a.(1) exception location. This location is greater than 50' from an existing well, within 150' of a property line, and within 500' of a building unit. Request and waivers are attached.

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

Location ID: 434921

Is this application being submitted with an Oil and Gas Location Assessment application? No

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

Signed: _____ Print Name: Paul Gottlob

Title: Regulatory & Engin. Tech. Date: 10/15/2015 Email: paul.gottlob@iptenergyservices

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:  Director of COGCC Date: 12/23/2015

Expiration Date: 12/22/2017

API NUMBER
05 001 09932 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 (spud notice) for the first well activity with a rig on the pad and provide 48 hour spud notice via Form 42 for all subsequent wells drilled on the pad.</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 Sussex to 200' above Sussex. Verify coverage with cement bond log.</p> |
| | <p>Operator acknowledges the proximity of the listed wells. Operator agrees to: provide mitigation option 1 or 2 (per the DJ Basin Horizontal Offset Policy) to mitigate the situation, ensure all applicable documentation is submitted based on the selected mitigation option chosen, and submit a Form 42 ("OFFSET MITIGATION COMPLETED") stating that appropriate mitigation occurred and that it has been completed, prior to the hydraulic stimulation of this well. Well does not have demonstrated zonal isolation.</p> <p>DARLOW UNIT #12-16B API# 001-07097; ELMS 2 API # 001-08919;</p> |

Best Management Practices

| <u>No</u> | <u>BMP/COA Type</u> | <u>Description</u> |
|-----------|--|--|
| 1 | Planning | 604.c(2)M. Fencing: A meeting with the surface owner will determine a fencing plan. |
| 2 | Planning | 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. 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. |
| 3 | 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. |
| 4 | Planning | 604.c.(2)J.ii 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. |
| 5 | 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. |
| 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. Dust control measures will also be utilized. The access road is already built. |
| 7 | Traffic control | 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. |
| 8 | 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. |
| 9 | Material Handling and Spill Prevention | 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. There will only be wellheads on this pad - no tanks or other equipment. |

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| 10 | Material Handling and Spill Prevention | 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. There will only be wellheads on this pad - no tanks or other equipment. |
| 11 | Construction | 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. There will only be wellheads on this pad - no tanks or other equipment. |
| 12 | Construction | 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. |
| 13 | 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. |
| 14 | Construction | 604.c.(2).E. This will be a multi-well pad. |
| 15 | Noise mitigation | 604.c.(2)A. Sound walls and/or hay bales will be used where necessary to surround the well site during drilling operations. |
| 16 | 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. 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. |
| 17 | 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. |
| 18 | Drilling/Completion Operations | 604.c.I: 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. |
| 19 | 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 this well. |
| 20 | Drilling/Completion Operations | 604.c.(2).K. Drilling and Completion- Pit level Indicators shall be used on location. No pits will be used on this location. |
| 21 | Drilling/Completion Operations | 604.c.(2).O. Drilling and Completion-All loadlines shall be bullplugged or capped. |
| 22 | Drilling/Completion Operations | 604.c.(2)B.i Operator will be utilizing a closed loop system. |

| | | |
|----|--------------------------------|---|
| 23 | 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. |
| 24 | Drilling/Completion Operations | Operator will comply with COGCC Policy for Bradenhead Monitoring During Hydraulic Fracturing Treatments in the Greater Wattenberg Area dated May 29, 2012. (attached) |
| 25 | Drilling/Completion Operations | 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. |
| 26 | Final Reclamation | 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) |
| 27 | Final Reclamation | 604.c.(2).U. Final Reclamation-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. |

Total: 27 comment(s)

Applicable Policies and Notices to Operators

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| 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

| Att Doc Num | Name |
|--------------------|----------------------------|
| 400566823 | FORM 2 SUBMITTED |
| 400578041 | EXCEPTION LOC REQUEST |
| 400578051 | EXCEPTION LOC REQUEST |
| 400578052 | SURFACE AGRMT/SURETY |
| 400578057 | EXCEPTION LOC WAIVERS |
| 400578133 | EXCEPTION LOC REQUEST |
| 400578135 | EXCEPTION LOC REQUEST |
| 400881206 | OffsetWellEvaluations Data |
| 400881209 | DIRECTIONAL DATA |
| 400881213 | DEVIATED DRILLING PLAN |
| 400881214 | WELL LOCATION PLAT |
| 400881215 | PROPOSED SPACING UNIT |
| 400881216 | MULTI-WELL PLAN |

Total Attach: 13 Files

General Comments

| <u>User Group</u> | <u>Comment</u> | <u>Comment Date</u> |
|-------------------|--|---------------------------|
| Final Review | Removed related Approved Form 4 (doc #400827392) which provided a revised multi-well plan to the Oil and Gas Location and was not necessary for this well. | 12/23/2015 9:29:38 AM |
| Permit | Final Review Completed. | 12/21/2015 3:10:26 PM |
| Permit | Per operator changed Right to construct from SUA to Oil & Gas lease. Added Anti-Collision, Bradenhead and Open Hole logging BMP's. The number of wells on pad are correct at 8. Permitting Review Complete. | 12/17/2015 3:08:43 PM |
| Permit | ON HOLD: requesting confirmation of Right to construct. Addition of Anti-Collision, Bradenhead and Open Hole logging BMP's. Confirmation of number of wells on pad. | 12/17/2015 11:27:12 AM |
| LGD | <p>1.The applicant shall obtain a GOW permit for the location and OSL permits for the equipment that will be onsite. The applicant needs to contact Mark Russell at 720-523-6821 for all appropriate permits.</p> <p>2.FIRM #08001C0302H – A portion of the site is in a 100 year floodplain.A floodplain use permit maybe required.</p> <p>3.The design and installation of erosion and sediment control BMPs are expected.</p> <p>4.The applicant shall use the existing access point onto Colorado Blvd. The applicant shall acquire an access easement with property owners and upgrade easement to accommodate additional traffic.</p> <p>5.The applicant shall provide accurate Tier II storage tank location information to the Adams County Emergency Management Department.</p> | 11/13/2015 10:12:46 AM |
| LGD | The operator shall obtain an MOU or Special Use Permit from Adams County prior to drilling. | 10/21/2015 12:13:43 PM |
| Permit | 10/20/2015: Sent email to permitter requesting permission to uncheck the Setback location exception Rule 604.a(1)A since this well is not in an Urban Mitigation Area. 10/20/2015: Received email permitting to uncheck the box mentioned above. | 10/20/2015 2:59:22 PM |

Total: 7 comment(s)