

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.)

There is no lease because there are no minerals applicable to the wellbore.

Total Acres in Described Lease: _____ 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: _____ Feet

CULTURAL DISTANCE INFORMATION

Distance to nearest:

Building: 891 Feet
Building Unit: 941 Feet
High Occupancy Building Unit: 5280 Feet
Designated Outside Activity Area: 5280 Feet
Public Road: 490 Feet
Above Ground Utility: 534 Feet
Railroad: 5280 Feet
Property Line: 348 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: 10/26/2015

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: 2645 Feet

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

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

SPACING & FORMATIONS COMMENTS

OBJECTIVE FORMATIONS

Objective Formation(s)	Formation Code	Spacing Order Number(s)	Unit Acreage Assigned to Well	Unit Configuration (N/2, SE/4, etc.)
AMAZON	AMZN			
FOUNTAIN	FNTN			
INGLESIDE	IGLD			
LOWER SATANKA	LSTKA			
LYONS	LYNS			
WOLFCAMP	WFCMP			

DRILLING PROGRAM

Proposed Total Measured Depth: 11302 Feet

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

35 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? No

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	12+1/4	9+5/8	36	0	1130	330	1130	0
1ST	8+3/4	7	26	0	9311	117	9311	7997
1ST LINER	6+1/8	4+1/2	13.5	9261	11302			
	8+3/4	7	Stage Tool		7997	837	7997	0

☒ 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 Forms 31 & 33 are being submitted same day as this Form 2.

This application is in a Comprehensive Drilling Plan No 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: Paul Gottlob

Title: Regulatory & Engin. Tech. Date: 12/14/2015 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: 2/8/2016

Expiration Date: 02/07/2018

API NUMBER

05 123 42698 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.

COA Type

Description

	<p>1. Injection is not authorized until approval of Forms 31 and 33.</p> <p>2. Operator is required to contact COGCC to discuss Step Rate Test or Injectivity Test criteria for Maximum Surface Injection Pressure determination.</p> <p>3. Prior approval of Form 4 is required for step rate and injectivity tests.</p> <p>4. Retrieve water sample(s) from injection zone(s) before stimulating formation. Samples must be analyzed for Total Dissolved Solids at a minimum.</p> <p>5. For all new drill Underground Injection Control wells a suite of open-hole Resistivity/Gamma Ray and Density/Neutron logs is required from Surface Casing shoe to TD. A PDF, TIFF, or PDS visual image and a LAS or DILS file version of each log is required.</p> <p>6. Operator must provide all tops of formations encountered from surface to TD on the Form 5 when submitted.</p>
	<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 Sussex to 200' above Sussex. Verify coverage with cement bond log.</p>

Best Management Practices

No BMP/COA Type

Description

1	Traffic control	RULE 604.c.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.
2	Traffic control	RULE 604.c.S: At the time of construction, all leasehold roads shall be constructed to accommodate local emergency vehicle access requirements, and shall be maintained in a reasonable condition.
3	General Housekeeping	RULE 604.c.P: All surface trash, debris, scrap or discarded material connected with the operations of the property shall be removed from the premises or disposed of in a legal manner.
4	Material Handling and Spill Prevention	RULE 604.c.F: The Operator shall develop a plan to monitor Production Facilities on a regular schedule to identify fluid leaks. This pad will only have the 2 wellheads, no tanks or facility equipment.
5	Construction	RULE 604.c.E: This will be a 2 well pad. One Vertical and one Directional.
6	Construction	RULE 604.c.M: Unless otherwise requested by the Surface Owner, well sites constructed within Designated Setback Locations, shall be adequately fenced to restrict access by unauthorized persons.
7	Construction	RULE 604.c.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	Construction	RULE 604.c.V: Where possible, operators shall provide for the development of multiple reservoirs by drilling on existing pads or by multiple completions or commingling in existing wellbores (see Rule 322). If any operator asserts it is not possible to comply with, or requests relief from, this requirement, the matter shall be set for hearing by the Commission and relief granted as appropriate. This will be a 2 well pad. One Vertical and one Directional.
9	Noise mitigation	RULE 604.c.A: Operations involving pipeline or gas facility installation or maintenance, or the use of a drilling rig, are subject to the maximum permissible noise levels for Light Industrial Zones, as measured at the nearest Building Unit. Short-term increases shall be allowable as described in 802.c. Stimulation or re-stimulation operations and Production Facilities are governed by Rule 802.

10	Noise mitigation	RULE 604.c.A: If determined necessary, lighting abatement measures shall be implemented, including the installation of lighting shield devices on all of the more conspicuous lights, low density sodium lighting where practicable; and rig shrouding is not believed necessary as the nearest building unit is 961' south, and a hill is just south of this well pad in between it and the building unit, however, at its election the operator may install temporary engineering controls consisting of perimeter sound walls during drilling and completion activities to provide noise relief. Permanent equipment on location shall be muffled to reduce noise, or shall be appropriately buffered.
11	Odor mitigation	RULE 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. Dust will be controlled by water spreading. Engine filters will be installed on all exhaust lines.
12	Drilling/Completion Operations	RULE 604.c.B: A Closed Loop Drilling System will be used and no pits.
13	Drilling/Completion Operations	RULE 604.c.C: Green Completions – No hydrocarbons anticipated – NA.
14	Drilling/Completion Operations	RULE 604.c.H: Blowout prevention equipment for drilling operations in a Designated Setback Location shall consist of (at a minimum): i. Rig with Kelly: Double ram with blind ram and pipe ram; annular preventer or a rotating head. ii. Rig without Kelly: Double ram with blind ram and pipe ram. Mineral Management certification or Director approved training for blowout prevention shall be required for at least one (1) person at the well site during drilling operations.
15	Drilling/Completion Operations	RULE 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.
16	Drilling/Completion Operations	RULE 604.c.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.
17	Drilling/Completion Operations	RULE 604.c.N: Any material not in use that might constitute a fire hazard shall be removed a minimum of twenty-five (25) feet from the wellhead, tanks and separator. Any electrical equipment installations inside the bermed area shall comply with API RP 500 classifications and comply with the current national electrical code as adopted by the State of Colorado. An emergency response plan has been generated for this site.
18	Drilling/Completion Operations	RULE 604.c.O: All loadlines shall be bullplugged or capped.
19	Drilling/Completion Operations	Well will be logged with an open hole logging tool with gamma ray. 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.
20	Drilling/Completion Operations	For a Vertical or Directional Well: Open-hole Resistivity Log with Gamma Ray Log will be run from TD into the surface casing. A Cement Bond Log with Gamma-Ray will be run on production casing, or on intermediate casing if a production liner is run. The Form 5, Completion Report, will list all logs run and have those logs attached.
21	Drilling/Completion Operations	RULE 317.r: Prior to drilling operations, Operator will perform an anti-collision scan of existing offset wells that have the potential of being within 150' of the proposed well(s). This anti-collision scan will include definitive MWD or Gyro Surveys of the offset wells with included error of uncertainty per survey instrument, and compared against the proposed well-path with its respective error of uncertainty. If current surveys do not exist for the offset wells, Operator may have Gyro Surveys conducted to verify the BHL. The proposed well will only be drilled if the anti-collision scan results indicate that there is not a risk for collision, or harm to people or the environment. For the proposed well, upon conclusion of drilling operations, an as-constructed Gyro Survey will be submitted to COGCC with Form 5 if required.

22	Final Reclamation	RULE 604.c.T: Within ninety (90) days after a well is plugged and abandoned, the well site shall be cleared of all non-essential equipment, trash, and debris. For good cause shown, an extension of time may be granted by the Director.
23	Final Reclamation	RULE 604.c.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.
24	Underground Injection Control	Formation Water, Mechanical Integrity, & Step Rate Tests will be done prior to approval to inject.

Total: 24 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

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
400929800	FORM 2 SUBMITTED
400929979	OffsetWellEvaluations Data
400929983	WELL LOCATION PLAT
400953295	SURFACE AGRMT/SURETY
400953308	SURFACE AGRMT/SURETY
400977528	SURFACE CASING CHECK

Total Attach: 6 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final Review Completed.	2/1/2016 2:20:07 PM
Permit	Per operator correct SUA attached as "other". Renamed 2nd one to Surface Agrmt/Surety. Permitting Review Complete.	1/26/2016 9:18:31 AM
Permit	ON HOLD: requesting a Surface Use Agreement that covers the surface in the SESW of section 28.	1/26/2016 8:49:21 AM
Engineer	Area review: No offset wells or permitted wells within 1/4 mile or 1/2 mile penetrate the formations planned for injection. Offset well evaluation: Operator offset well spreadsheet not required for this vertical well. Offset wells meet standards for Amazon, Fountain, Ingleside, Lower Satanka , Wolfcamp, and Lyons formations. Nearest planned or permitted well penetrating objective formations is 2645'. Changed distance to nearest existing or permitted wellbore belonging to another operator from 2645' to 35' (horizontal Niobrara well Howard #28N-28HZ API # 123-37678) Added UIC Lead review task.	1/25/2016 2:51:18 PM
Permit	Passed completeness.	12/22/2015 9:43:52 AM

Total: 5 comment(s)