

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.)

T1S-R65W Section 4: Lot 1 (60.49), Lot 2 (59.78), S2N2, N2SW, SESW, SE, SWSW

Total Acres in Described Lease: 600 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: 1625 Feet
 Building Unit: 2025 Feet
 High Occupancy Building Unit: 5280 Feet
 Designated Outside Activity Area: 5280 Feet
 Public Road: 644 Feet
 Above Ground Utility: 510 Feet
 Railroad: 5280 Feet
 Property Line: 350 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: 204 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary 470 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.)
NIOBRARA	NBRR	407-2425	1280	S. 4 & 9

DRILLING PROGRAM

Proposed Total Measured Depth: 17026 Feet

Distance from the proposed wellbore to nearest existing or proposed wellbore belonging to another operator, including plugged wells:

Enter distance if less than or equal to 1,500 feet: 185 Feet No well belonging to another operator within 1,500 feet

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: 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
CONDUCTOR	26	16	43	0	80	400	80	0
SURF	13+1/2	9+5/8	36	0	1500	878	1500	0
1ST	8+3/4	5+1/2	17	0	17026	2295	17026	

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 Distance from completed portion of the wellbore to nearest wellbore permitted or completed in the same formation was measured to the proposed Confluence Desha 4-10-4L using vertical separation. Distance from the proposed wellbore to the nearest existing or proposed wellbore belonging to another operator, including plugged wells was measured to the Drilled and Abandoned Haskins 4-12 (API Number 05-001-09199) operated by Sovereign Energy LLC. The Exception Location waiver is located on page 2, section 5 of the attached Surface Use Agreement. For questions regarding this permit please contact Andrea Gross. For questions regarding the OWE please email both Brittany and Andrea.

This application is in a Comprehensive Drilling Plan No CDP #: _____

Location ID: 452048

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: Andrea Gross

Title: Permit Agent Date: 5/2/2018 Email: agross@upstreampm.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:  Director of COGCC Date: 7/14/2018

Expiration Date: 07/13/2020

API NUMBER

05 123 47338 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
	Operator shall comply with Notice to Operators: Interim Reclamation Procedures for Delayed Operation (dated January 5, 2017).
	If conductors are preset, Operator shall comply with Notice to Operators: Procedures for Preset Conductors (dated September 1, 2016, revised October 6, 2016).
	<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 TD to a minimum of 200' above Niobrara and from 200' below Shannon to 200' above Sussex. Verify coverage with cement bond log.</p> <p>3) Oil-based drilling fluid is to be used only after all fresh water aquifers are covered.</p>
	<p>Bradenhead tests shall be performed according to the following schedule and the Form 17 submitted within 10 days of each test:</p> <p>1) Within 60 days of rig release and prior to stimulation and</p> <p>2) If a delayed completion, 6 months after rig release and prior to stimulation.</p> <p>3) Within 30 days after first production, as reported on Form 5A.</p>
	<p>Operator acknowledges the proximity of the non-operated 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.</p> <p>Well Name API # KALLSEN 32-9 2 (API 05-001-07980)</p> <p>Operator acknowledges the proximity of the non-operated listed wells. Operator agrees to: provide mitigation option 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.</p> <p>Well Name API # HASKINS 1 (API 05-001-08831) KALLSEN 24-9 1 (API 05-001-07732) KALLSEN A-1 (API 05-001-09073)</p> <p>Operator acknowledges the proximity of the listed non-operated wells. Operator assures that this offset list will be remediated per the DJ Basin Horizontal Offset Policy (option 3). Operator will submit a Form 42 ("OFFSET MITIGATION COMPLETED") stating what appropriate mitigation occurred and that it has been completed, prior to the hydraulic stimulation of this well.</p> <p>Well Name API # HELEN M PENROD 1 (API 05-001-06867) PENROD 4-3 (API 05-001-08766) CIMARRON-PENROD 2 (API 05-001-08830) UPRR 33 PAN AM NAV 1 (API 05-001-06229) PENROD 4-15 1 (API 05-001-08266)</p> <p>Operator acknowledges the proximity of the listed wells. Operator assures that this offset list will be remediated per the DJ Basin Horizontal Offset Policy (option 4). Operator will submit a Form 42 ("OTHER – AS SPECIFIED BY PERMIT CONDITION") stating that appropriate mitigation will be completed, during the hydraulic stimulation of this permitted well. This Form 42 shall be filed 48 hours prior to stimulation. Operator will assure that the offset well's Bradenhead is open and continuously monitored during the entire stimulation treatment for all fracs on this pad for any evidence of fluid, a Bradenhead test will be performed prior to the beginning of stimulation.</p> <p>TIPPERARY 1 (API 05-123-08116)</p>

Best Management Practices

No	<u>BMP/COA Type</u>	<u>Description</u>
1	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 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.
2	Drilling/Completion Operations	Confluence 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 will be given to all offset operators within 150 feet prior to drilling.
3	Drilling/Completion Operations	Operator acknowledges and will comply with COGCC policy for Bradenhead Monitoring during Hydraulic fracturing treatments in the Greater Wattenberg Area dated May 29, 2012.

Total: 3 comment(s)

Applicable Policies and Notices to Operators

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>
401392106	FORM 2 RESUBMITTED
401628115	FORM 2 SUBMITTED
401628116	FORM 2 REJECTED
401628237	DIRECTIONAL DATA
401628238	EXCEPTION LOC REQUEST
401628239	DEVIATED DRILLING PLAN
401628240	WELL LOCATION PLAT
401628241	SURFACE AGRMT/SURETY
401695668	OffsetWellEvaluations Data
401703247	OFFSET WELL EVALUATION

Total Attach: 10 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Status Active - per Operator request, revised open hole logging BMP to reflect that open hole resistivity/gamma logs will be run on an additional well on the pad. Final review complete.	07/10/2018
Permit	Status Pending - contacted Operator regarding the open hole log cited in the BMP. The log (attached to Form 5 doc# 401556334, in process), does not meet guidance criteria as the gamma ray does not cover the interval all the way to surface casing. Request a revised log, or revise the BMP.	07/09/2018
Engineer	317.r No active non-op wellbores within 150'. 317.s No stimulation setback consents required.	07/06/2018
Permit	Status Active - corrections made with Operator concurrence: - unchecked box "surface owner is mineral owner". - changed distance to nearest property line from 450' to 350'. - Revised open hole logging BMP text from "All wells related to this permit..." to "All wells on the pad...". Permitting review complete.	06/13/2018
Permit	Status Pending - contact Operator for corrections: - confirm surface owner is mineral owner; approved 2A has box unchecked. - verify distance to property line (450'); per SUA and parcel layer on COGIS map it appears the well's SHL is approximately 350' from the property line.	06/09/2018
Permit	- Deleted pending docket comment and added spacing order number on Spacing tab.	06/09/2018
Permit	Passed completeness.	05/03/2018
Permit	REJECTION COMMENT: This APD is being rejected per the Rejection Process criteria that a pad of Form 2's requiring a total of four or more attachments to be added will be rejected. This pad requires a complete and accurate Offset Well Evaluation for a total of 21 APD's. The Operator and COGCC staff have been consulted.	05/02/2018
Permit	ON HOLD: may be rejected.	05/01/2018
Permit	Passed Completeness.	09/26/2017
Permit	Returned to draft for: - attachment "EXCEPTION LOC REQUEST" is for a different well - Spacing & Formations tab: the OBJECTIVE FORMATIONS area is missing Unit Acreage and the Unit configuration	09/11/2017

Total: 11 comment(s)