

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 7 North, Range 80 West, 6th PM:
Section 4: Lot 2 (41.06), 3 (40.80), 4 (40.53), SWNE, W/2SE, SESE, SW, S/2NW
Section 5: Lot 1 (40.38), 2 (40.35), 3 (40.32), S/2NE, SE, E/2SW, SENW
Section 8: E/2, SW, E/2NW, SWNW
Section 9: All
Section 16: All
Section 17: N/2
Township 8 North, Range 80 West, 6th PM:
Section 32: E/2SE, SWSE, SESW
Section 33: S/2 less ROW
3664.46 acres

Total Acres in Described Lease: 3664 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: 600 Feet

CULTURAL DISTANCE INFORMATION

Distance to nearest:

Building: 5280 Feet
Building Unit: 5280 Feet
High Occupancy Building Unit: 5280 Feet
Designated Outside Activity Area: 5280 Feet
Public Road: 5134 Feet
Above Ground Utility: 5280 Feet
Railroad: 5280 Feet
Property Line: 198 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 Wellbore to Nearest Wellbore Permitted or Completed in the same formation: 1321 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary 600 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	531-2	640	S. 21: All

DRILLING PROGRAM

Proposed Total Measured Depth: 12958 Feet

Distance to nearest permitted or existing wellbore penetrating objective formation: 1321 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 609

DRILLING WASTE MANAGEMENT PROGRAM

Drilling Fluids Disposal: OFFSITE Drilling Fluids Disposal Methods: Commercial Disposal

Cuttings Disposal: ONSITE Cuttings Disposal Method: Cuttings trench

Other Disposal Description:

The cuttings will be remediated onsite using EcoSponge.

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	1400	900	1400	0
1ST	8+3/4	5+1/2	17	0	12958	1725	12958	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 Rule 303.b.(3)J.iii: no pre-app notification to Surface Owner required per SUA (attached).
This well is being permitted as one of two horizontal wellbores: the other is the Evans 2-21H Doc 400619283.

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: Ann Stephens

Title: Regulatory Manager Date: 6/9/2014 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: 7/24/2014

Expiration Date: 07/23/2016

API NUMBER
05 057 06531 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

	Open hole resistivity and gamma logs shall be run to describe the stratigraphy of the entire well bore and to adequately verify the setting depth of surface casing and aquifer coverage. On a multi-well pad, these open hole logs are only required on one of the first wells drilled on the pad and the Drilling Completion Report - Form 5 for every well on the pad shall identify which well was logged.
	(1) COMPLIANCE WITH THE MOST CURRENT REVISION OF THE NORTHWEST COLORADO NOTIFICATION POLICY IS REQUIRED. SEE ATTACHED NOTICE. (2) COGCC CONCURS WITH OPERATORS PROPOSED FIRST STRING CEMENT TOP AT THE GROUND SURFACE. AT A MINIMUM, FIRST STRING (5-1/2" CASING) CEMENT SHALL EXTEND FROM THE FIRST STRING CASING SHOE TO AT LEAST 200' ABOVE THE SURFACE CASING SHOE TO PROVIDE FULL ISOLATION OF THE COALMONT FORMATION. FIRST STRING CEMENT COVERAGE VERIFICATION BY CBL IS REQUIRED.

Best Management Practices

No	BMP/COA Type	Description
1	Planning	A multi-well site will be used for directional drilling to reduce cumulative impacts and adverse impacts on wildlife resources. Pits are not planned for this location.
2	General Housekeeping	Fence the well site after drilling to restrict public and wildlife access. Keep well site location, road and the pipeline easement free of noxious weeds, litter and debris. Spray for noxious weeds and implement dust control, as needed. Operator will not permit the release or discharge of any toxic or hazardous chemicals or wastes on Owner's Land. Construct and maintain gates where any roads used by operator, its employees, or contractors cross through fences on the leased premises.
3	Wildlife	Where oil and gas activities must occur within the greater sage grouse leks or within other mapped greater sage grouse breeding or summer habitat, Operator will conduct these activities outside the period between March 1 and June 30. Restrict post development well site visitations to portions of the day between 9:00 am and 4:00 pm during the lekking season (March 1 to May 15). Use hospital grade mufflers for compressors, pump jacks or other motors necessary to run operations at the site. Mufflers will be pointed upward to dissipate potential vibration. Establish company guidelines to minimize wildlife mortality from vehicle collisions on roads. Slow speeds and increased awareness among employees and contractors should lessen impacts to wildlife. Install and utilize bear-proof dumpsters and trash receptacles for all food-related trash on location, following COGCC Rule 1204.a.(1).
4	Storm Water/Erosion Control	Use water bars and other measures to prevent erosion and non-source pollution. Implement and maintain BMPs to control storm water 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).
5	Construction	Remove only the minimum amount of vegetation necessary for the construction of roads and facilities. Conserve topsoil during excavation and reuse as cover on disturbed areas to facilitate regrowth of vegetation. No construction or routine maintenance activities will be performed during periods when the soil is too wet to adequately support construction equipment.
6	Noise mitigation	The drill site is far enough away from any building units that noise mitigation will not be required.
7	Drilling/Completion Operations	A closed-loop drilling mud system will be used to preclude the use of an earthen reserve pit when available. Light Sources will likewise 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.
8	Interim Reclamation	Utilize only such area around each producing well as is reasonably necessary. Restore the remainder of the well site location to its original condition within a reasonable time after the completion of operations. All reseeding shall be done with grasses consistent with the Rocky Mountain native mix or other grasses reasonably requested by surface owner and during planting period suggested by Owner.
9	Final Reclamation	All surface restoration shall be accomplished to the satisfaction of Owner. All reseeding shall be done with grasses consistent with the Rocky Mountain native mix or other grasses reasonably requested by surface owner and during planting period suggested by Owner. Final reclamation shall be completed to the reasonable satisfaction of the Owner as soon as practical after installation (weather permitting) and in accordance with regulatory agency standards (BLM/COGCC).

Total: 9 comment(s)

Applicable Policies and Notices to Operators

NW Colorado Notification Policy.

Notice Concerning Operating Requirements for Wildlife Protection.

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
400621812	FORM 2 SUBMITTED
400622302	WELL LOCATION PLAT
400622305	DEVIATED DRILLING PLAN
400622307	DIRECTIONAL DATA
400623449	SURFACE AGRMT/SURETY

Total Attach: 5 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Oper. corrected dist. to prop. line, distances to nearest wells. Oper. corrected right to construct to SUA. No LGD or public comments. Final Review--passed.	7/24/2014 3:24:33 PM
Permit	Corrected distance to unit boundary as per opr. Ready to pass pending OGLA approval of the 2A.	7/10/2014 10:20:13 AM
Permit	The distance to the unit boundary s/b 600' instead of 5280. BLM minerals leased on S2SE of Sec 21 doesn't include this surface. Opr notified.	7/7/2014 1:10:58 PM
Engineer	THE PROPOSED SURFACE CASING IS MORE THAN 50' BELOW THE DEPTH OF THE DEEPEST WATER WELL WITHIN 1-MILE OF THE SURFACE LOCATION WHEN CORRECTED FOR ELEVATION DIFFERENCES. THE DEEPEST WATER WELL WITHIN 1-MILE IS 150 FEET DEEP. PROPOSED SURFACE CASING OF 1400' WILL NOT PROVIDE FULL COVERAGE OF COALMONT FORMATION, BASED ON OPERATOR'S GEOLOGIC PROGNOSIS. No existing offset wells within 1500' of the planned wellbore. The proposed casing and cement configuration for one permitted well, Homestead 04-09H (057-06495) meets standards for geologic isolation, and no offset well mitigation is required.	6/19/2014 11:51:47 AM
Permit	Passed completeness. Distance to lease line filled in.	6/12/2014 2:17:42 PM
Permit	Return to draft. Distance from Completed Portion of Wellbore to Nearest Lease Line of described lease is blank.	6/11/2014 3:15:42 PM

Total: 6 comment(s)