

FORM  
2

Rev  
08/13

## State of Colorado

### Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203  
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:

400479976

#### APPLICATION FOR PERMIT TO:

☒ Drill ☐ Deepen ☐ Re-enter ☐ Recomplete and Operate

TYPE OF WELL OIL ☐ GAS ☒ COALBED ☐ OTHER \_\_\_\_\_

Refilling ☐

ZONE TYPE SINGLE ZONE ☒ MULTIPLE ZONES ☐ COMMINGLE ZONES ☐

Sidetrack ☐

Date Received:

09/16/2013

Well Name: GRENNEMYER

Well Number: 35N-3HZ

Name of Operator: KERR-MCGEE OIL & GAS ONSHORE LP

COGCC Operator Number: 47120

Address: P O BOX 173779

City: DENVER

State: CO

Zip: 80217-3779

Contact Name: CHERYL LIGHT

Phone: (720)929-6461

Fax: (720)929-7461

Email: cheryl.light@anadarko.com

#### RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20010124

#### WELL LOCATION INFORMATION

QtrQtr: NENW Sec: 34 Twp: 1N Rng: 67W Meridian: 6

Latitude: 40.013615

Longitude: -104.880270

Footage at Surface: 445 feet FNL/FSL FNL 1615 feet FEL/FWL FWL

Field Name: WATTENBERG

Field Number: 90750

Ground Elevation: 5047

County: WELD

GPS Data:

Date of Measurement: 06/19/2013 PDOP Reading: 1.9 Instrument Operator's Name: BART PFEIFER

If well is ☐ Directional ☒ Horizontal (highly deviated) **submit deviated drilling plan.**

Footage at Top of Prod Zone: FNL/FSL FNL 2102 FWL FNL 460 FSL 1645 FWL  
Sec: 34 Twp: 1N Rng: 67W Sec: 3 Twp: 1S Rng: 67W

#### LOCATION SURFACE & MINERALS & RIGHT TO CONSTRUCT

Surface Ownership: ☒ Fee ☐ State ☐ Federal ☐ Indian

The Surface Owner is: ☒ is the mineral owner beneath the location.

(check all that apply) ☒ is committed to an Oil and Gas Lease.

☒ has signed the Oil and Gas Lease.

☐ is the applicant.

The Mineral Owner beneath this Oil and Gas Location is: ☒ Fee ☐ State ☐ Federal ☐ Indian

The Minerals beneath this Oil and Gas Location will be developed by this Well: Yes

The right to construct the Oil and Gas Location is granted by: oil and gas lease

Surface damage assurance if no agreement is in place: \_\_\_\_\_

Surface Surety ID: \_\_\_\_\_

## 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.)

Please see attached lease description and map.

Total Acres in Described Lease: 191 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: 1066 Feet

Building Unit: 1013 Feet

High Occupancy Building Unit: 5280 Feet

Designated Outside Activity Area: 5280 Feet

Public Road: 445 Feet

Above Ground Utility: 422 Feet

Railroad: 5280 Feet

Property Line: 240 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: 87 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

Unit configuration: 1N-67W-34 E2W2 / 1S-67W-3 W2

## 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		480	GWA

## DRILLING PROGRAM

Proposed Total Measured Depth: 17131 Feet

Distance to nearest permitted or existing wellbore penetrating objective formation: 87 Feet (Including plugged wells)

Will a closed-loop drilling system be used? Yes

Is H<sub>2</sub>S gas reasonably expected to be encountered during drilling operations at concentrations greater than or equal to 100 ppm? No (If Yes, attach an H<sub>2</sub>S 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: Recycle/reuse

Cuttings Disposal: OFFSITE Cuttings Disposal Method: Commercial Disposal

Other Disposal Description:

Please see comments section. Disposal description will not fit in space provided.

Beneficial reuse or land application plan submitted? Yes

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	1025	380	1025	0
1ST	8+3/4	7	26	0	7921	840	7921	0
1ST LINER	6+1/8	4+1/2	11.6	6920	17131			

☒ 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	<p>Drilling fluids disposal: KMG will reuse oil-based drilling fluids to maximum extent at which point they will be returned to the fluids manufacturer for re-conditioning or disposal at a licensed, commercial disposal site.</p> <p>Cuttings disposal: Water based cuttings will be used to drill the curve of the well. They will be disposed of using a Centralized E&amp;P Waste Management facility or a private spread field depending on what is feasible at time of drilling. Oil based cuttings will be used to drill the lateral of the well. They will be disposed of offsite and at a licensed, commercial disposal site.</p> <p>Operator will run open hole logs into the surface casing on the first well drilled on this pad.</p> <p>Kerr-McGee Oil &amp; Gas Onshore LP ("KMG") respectfully requests the Director to waive Rule 318A.m for this well. KMG is the operator of the encroached upon well(s). Please see attached Compliance Letter.</p>
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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: Cheryl Light

Title: Sr. Regulatory Analyst Date: 9/16/2013 Email: DJRegulatory@anadarko.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: 10/18/2013

Expiration Date: 10/17/2015

**API NUMBER**

05 123 38340 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)Note surface casing setting depth change from 999' to 1025'. Increase cement coverage accordingly and cement to surface.</p> <p>2)Provide notice of MIRU via an electronic Form 42.</p> <p>3)Comply with Rule 317.i and provide cement coverage from the 7" casing TD to a minimum of 200' above the Niobrara and from 200' below Sussex to 200' above Sussex. Verify coverage with a cement bond log.</p> <p>4)Operator acknowledges the proximity of the UPRR 42 Pan Am K 1 (API# 123-07792), Grenemeyer Wagner C Unit 1 (API #123-10492), Seltzer 23-3 (API #001-09119), and Seltzer 1 (API #123-07546) wells. Operator agrees to: provide mitigation option 1, 2 or 3 (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 ("OTHER – AS SPECIFIED BY PERMIT CONDITION") stating what appropriate mitigation occurred and that it has been completed, prior to the hydraulic stimulation of this well.</p>
	Operator must meet water well testing requirements per Rule 318A.

## Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
1	Planning	604c.(2).Q. Guy Line Anchors: Should guy line anchors be left buried for future use, they shall be identified by a bright marker greater than four (4) feet high and no more than one (1) foot east of the guy line anchor.
2	Planning	604c.(2).S. Access Roads: KMG will utilize the lease access road from WCR 4 for drilling operations and maintenance equipment. The road will be properly constructed and maintained to accommodate for local emergency vehicle access.
3	Planning	604c.(2).T. Well Site Cleared: The wellsite will be cleared of all non-essential equipment within ninety (90) days after all wells associated with the pad have been plugged and abandoned.
4	Planning	604c.(2).V. Development From Existing Well Pads: KMG is developing multiple reservoirs as close to existing wells as space will allow; the Grenemyer Wagner 21-34, Wagner 1-B, Wagner 1, and Grenemyer Wagner C Unit 1 wells. Drilling from an existing well pad was not feasible for the development of these wells; however, this well pad will be considered for future well locations.
5	Traffic control	604c.(2).D. Traffic Plan: If required by the local government, a traffic plan will be coordinated with the local jurisdiction prior to commencement of operations. Weld County Road 4 is paved and maintained by Weld County and will therefore not require dust mitigation.
6	General Housekeeping	604c.(2).O. Loadlines: All loadlines shall be bullplugged or capped.
7	General Housekeeping	604c.(2).P. Removal of Surface Trash: A commercial size trash bin for removing debris will be located on site. This bin will be for use by all parties affiliated with the operation.
8	Storm Water/Erosion Control	604c.(2).W. Site-specific Measures: KMG maintains a Stormwater Management Plan that includes each wellsite location that assesses erosion control for each well pad. This plan is updated every fourteen (14) days and after any major weather event.

9	Material Handling and Spill Prevention	604c.(2).F. Leak Detection Plan: Automation technology will be utilized at this facility. This technology includes the use of fluid level monitoring for the tanks and produced water sumps, high-level shut offs, and electronic sensors to monitor the interstitial space of double-walled produced water sumps. All automation is monitored by Kerr-McGee's Integrated Operations Center (IOC,) which is manned 24 hours per day, 7 days per week.
10	Material Handling and Spill Prevention	604c.(2).N. Control of Fire Hazards: KMG and its contractors will employ best management practices during the drilling and production of its wells and facilities and will comply with appropriate COGCC rules concerning safety and fire. KMG will ensure that any material that might be deemed a fire hazard will be will remain no less than twenty-five (25) feet from the wellhead(s), tanks and separator(s).
11	Construction	604c.(2).M. Fencing Requirements: No fencing is necessary for this location.
12	Construction	604c.(2).R. Tank Specifications: Two 500 barrel steel tanks will be temporarily placed on-site for use of the pre-spud rig. One tank will store water and the other will store water based mud.
13	Construction	604c.(2).E. Multiwell Pads: This application is part of a three-well pad.
14	Noise mitigation	604c.(2).A. Noise: Sound mitigation barriers (hay bales) will be placed along the northern and eastern sides of the pad location to damper noise during drilling and completions to the nearby residence and to Weld County Road 4. Sound surveys have been conducted on each rig type, which are utilized to anticipate any additional noise mitigation if necessary.
15	Drilling/Completion Operations	Kerr McGee acknowledges and will comply with the COGCC Policy for Bradenhead Monitoring during Hydraulic Fracturing Treatments in the Greater Wattenberg Area dated May 29, 2012.
16	Drilling/Completion Operations	<p>Prior to drilling operations, Operator may perform an anti-collision review of existing offset wells that have the potential of being within close proximity of the proposed well. This anti-collision review may include MWD or gyro surveys and surface locations of the offset wells with included error of uncertainty per survey instrument, and compared against the proposed wellpath with its respective error of uncertainty. If current surveys do not exist for the offset wells, Operator may have gyro surveys conducted to verify bottomhole location. The proposed well may only be drilled if the anti-collision review results indicate that the risk of collision is sufficiently low as defined by the anti-collision plan, with separation factors greater than 1.5, or if the risk of collision has been mitigated through other means including shutting in wells, plugging wells, increased drilling fluid in the event of lost returns or as is appropriate for the specific situation. In the event of an increased risk of collision, that risk will be mitigated to prevent harm to people, the environment or property. For the proposed well, upon conclusion of drilling operations, an as-constructed directional survey will be submitted to COGCC with the Form 5.</p> <p>At the time of permitting, the operator has identified the following well(s) as being within close proximity of the proposed wells: SELTZER FARMS A 4, SELTZER 23-3  Anti-collision: WAGNER 1B, GRENEMEYER WAGNER 21-34, XCEL 11C-22HZ (permit submitted 9-2013)</p>
17	Drilling/Completion Operations	604c.(2).B. Closed Loop Drilling System: KMG will use a closed loop or "pitless" system for drilling and fluid management and will not construct a reserve pit.
18	Drilling/Completion Operations	604c.(2).C. Green Completions: KMG will install Vapor Recovery Unit(s) (VRU) to prevent uncontrolled venting of flash gas. Environmental Control Devices (ECD) will be used to control working and breathing vapor losses for oil and water tanks. Temporary above ground polyethylene water pipelines will deliver water to location operations from larger trunk lines to reduce truck traffic and minimize air pollution.
19	Drilling/Completion Operations	604c.(2).H. BOPE: Our rigs at a minimum will have a double ram with blind and pipe ram; and annular preventer.
20	Drilling/Completion Operations	604c.(2).I. BOPE Testing for Drilling Operations: Upon initial rig-up, BOPE's will be tested at a minimum of every 30-days.

21	Drilling/Completion Operations	604c.(2).J. BOPE for Well Servicing Operations: Blowout prevention equipment will be used on any servicing operations associated with this well. Backup stabbing valves will be used during any future servicing operations during reverse circulation. Valves shall be pressure tested before each well servicing operation using low-pressure air and high-pressure fluid.
22	Drilling/Completion Operations	604c.(2).K. Pit Level Indicators: All mud pits contain pit level monitors with Electronic Drilling Recorders (EDR) KMG uses an Electronic Drilling Recorder (EDR) with pit level monitor(s) and alarm(s) for production rigs. Basic level gages are used on pits utilized for the surface rig.
23	Drilling/Completion Operations	604c.(2).L. Drill Stem Tests: No drill stem tests will be performed without prior approval from the director.
24	Final Reclamation	604c.(2).U. Identification of Plugged and Abandoned Wells: Pursuant to rule 319.a.(5)., once the well has been plugged and abandoned, KMG will identify the location of the wellbore with a permanent monument that will detail the well name and date of plugging

Total: 24 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**

<b><u>Att Doc Num</u></b>	<b><u>Name</u></b>
400479976	FORM 2 SUBMITTED
400479983	LEGAL/LEASE DESCRIPTION
400479984	EXCEPTION LOC REQUEST
400479985	PROPOSED SPACING UNIT
400479986	DEVIATED DRILLING PLAN
400479988	WELL LOCATION PLAT
400479989	OTHER
400479990	DIRECTIONAL DATA
400479991	SURFACE AGRMT/SURETY
400479992	EXCEPTION LOC WAIVERS
400479994	VARIANCE REQUEST
400480998	OffsetWellEvaluations Data

Total Attach: 12 Files

## General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final Review Completed. No LGD or public comment received.	10/18/2013 10:38:46 AM
Engineer	Evaluated offset wells for adequate coverage.  The existing surface casing check on file is still valid and the proposed surface casing setting depth is adequate. See document number 2578155.	10/16/2013 10:45:01 AM
Permit	ok to pass.	9/24/2013 3:31:26 PM
Permit	Operator requests approval of a Rule 318Am exception location: Wellbore is to be located less than 150' from an existing wellbore. Request and waivers attached.	9/24/2013 3:31:01 PM
Permit	Operator requests approval of a Rule 318Aa and Rule 318Ac exception location: Wellhead is to be located outside of a GWA drilling window and will be located more than 50' from an existing well location. Request and waivers attached.	9/24/2013 3:31:00 PM
Permit	Operator's request for omission of open hole logs.	9/24/2013 3:30:59 PM
Permit	Horizontal wellbore crosses lease lines within drilling and spacing unit; distance to lease line is 0'; distance to unit boundary is 460'.	9/24/2013 3:30:58 PM
Permit	This form has passed completeness.	9/17/2013 12:11:06 PM

Total: 8 comment(s)