

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:  
400466007

APPLICATION FOR PERMIT TO:

Drill       Deepen       Re-enter       Recomplete and Operate

Date Received:  
08/16/2013

TYPE OF WELL    OIL     GAS     COALBED     OTHER \_\_\_\_\_  
ZONE TYPE      SINGLE ZONE     MULTIPLE ZONES     COMMINGLE ZONES

Refiling   
Sidetrack

Well Name: HOWARD      Well Number: 2N-33HZR  
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: NENE      Sec: 28      Twp: 1N      Rng: 67W      Meridian: 6  
Latitude: 40.028309      Longitude: -104.890029

Footage at Surface: 370 feet      FNL/FSL FNL 1094 feet      FEL/FWL FEL

Field Name: WATTENBERG      Field Number: 90750

Ground Elevation: 4983      County: WELD

GPS Data:  
Date of Measurement: 07/11/2013    PDOP Reading: 1.4    Instrument Operator's Name: CONNER MAHOSKEY

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

Footage at Top of Prod Zone: FNL/FSL FNL 2000 FEL      Bottom Hole: FNL/FSL FNL 2000 FEL  
631      FNL      2000      FEL      200      FNL      2000      FEL  
Sec: 28      Twp: 1N      Rng: 67W      Sec: 33      Twp: 1N      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: Surface Use Agreement

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.)

Horizontal wellbore will produce from multiple leases. See attached lease description.

Total Acres in Described Lease: 480 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: 440 Feet

Building Unit: 440 Feet

High Occupancy Building Unit: 5280 Feet

Designated Outside Activity Area: 5280 Feet

Public Road: 376 Feet

Above Ground Utility: 398 Feet

Railroad: 5280 Feet

Property Line: 376 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: 357 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary 631 Feet (Enter 5280 for distance greater than 1 mile.)

Federal or State Unit Name (if appl): \_\_\_\_\_ Unit Number: \_\_\_\_\_

**SPACING & FORMATIONS COMMENTS**

Unit : 1N-67W Sec 28 W/2E/2, Sec 33 NW/NE.

**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		200	GWA

**DRILLING PROGRAM**

Proposed Total Measured Depth: 12769 Feet

Distance to nearest permitted or existing wellbore penetrating objective formation: 357 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? 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: Land application

Cuttings Disposal: ONSITE Cuttings Disposal Method: Other

Other Disposal Description:

Land application and bioremediation treated onsite.

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	13+1/2	9+5/8	36	0	1000	380	1000	0
1ST	8+3/4	7+0/0	26	0	7918	840	7918	0
1ST LINER	6+1/8	4+1/2	11.6	6918	12768			

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 THE HOWARD 2N-33HZR IS A REDRILL FOR THE HOWARD 2N-33HZ (O5-123-36927) WHICH HAS BEEN PLUGGED DUE TO PROBLEMS ENCOUNTERED DURING THE SETTING OF THE SURFACE CASING. THE REDRILL WILL NOT EXPAND THE PREVIOUSLY APPROVED DISTURBANCE; THEREFORE A NEW AND/OR AMMENDED 2A IS NOT NEEDED.

This application is in a Comprehensive Drilling Plan \_\_\_\_\_ CDP #: \_\_\_\_\_

Location ID: 318894

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: CHERYL LIGHT

Title: SR. REGULATORY ANALYST Date: 8/16/2013 Email: DJREGULATORY@ANADARK

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: 9/12/2013

Expiration Date: 09/11/2015

API NUMBER
05 123 38006 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>
	Operator must meet water well testing requirements per Rule 318A.
	1)Provide notice of MIRU via an electronic Form 42. 2)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.

### Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
1	Planning	604c.(2).E. Multiwell Pads: This re-drill well application is part of a six-well pad. The associated Oil and Gas Location Assessment (Form 2A) has been approved by the COGCC.
2	Traffic control	604c.(2).D. Traffic Plan: A traffic plan is not required by the local government for this well location. Weld County Road 6 (North) and County Road 19 (East) are both paved and maintained by Weld County and will therefore not require dust mitigation. KMG has offset the access road to avoid traffic interference with the residence to the North.

3	Traffic control	604c.(2).S. Access Roads: KMG will utilize the lease access road from WCR 6 for drilling operations and maintenance equipment. The road will be properly constructed and maintained to accommodate for local emergency vehicle access.
4	General Housekeeping	604c.(2).O. Loadlines: All loadlines shall be bullplugged or capped.
5	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.
6	General Housekeeping	604c.(2).V. Development From Existing Well Pads: KMG is developing multiple reservoirs on the existing Yoxall Farms 10 well pad.
7	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.
8	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.
9	Material Handling and Spill Prevention	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.
10	Material Handling and Spill Prevention	604c.(2).N. Control of Fire Hazards: 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).G. Berm Construction: A plastic liner has been laid under the tanks on this location and a metal containment has been constructed. A 6-8" deep ditch has been constructed around the perimeter of the location for additional protection. The stockpiles generated from construction were placed on the southeast edge of the pad between the pad and the existing creek.
12	Construction	604c.(2).M. Fencing Requirements: No fencing was installed on this existing location.
13	Construction	604c.(2).R. Tank Specifications: Condensate storage tanks will be designed, constructed and maintained pursuant to code 30 of the National Fire Protection Association. KMG will maintain written records to verify proper design.
14	Noise mitigation	604c.(2).A. Noise: A sound mitigation burier (hay bales) has been placed on the northern side of the pad location to damper noise during drilling and completions to the nearby residence and to Weld County Road 6. No additional noise mitigation has been requested during our recent drilling activity.
15	Drilling/Completion Operations	604c.(2).B. Closed Loop Drilling System: A closed loop drilling system has been utilized during drilling of the wells recently drilled on this location and will be used for the proposed redrill as well.
16	Drilling/Completion Operations	604c.(2).C. Green Completions: Kerr-McGee will install a vapor recovery unit to prevent any uncontrolled venting. Produced oil and gas will be piped off of location to minimize truck exhaust and flaring. Temporary flowback flaring and oxidizing equipment shall be used.
17	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.
18	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.

19	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.
20	Drilling/Completion Operations	604c.(2).L. Drill Stem Tests: No drill stem tests will be performed without prior approval from the director.
21	Drilling/Completion Operations	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.
22	Drilling/Completion Operations	Anti-collision: Prior to drilling operations, Operator will perform an anti-collision scan of existing offset wells that have the potential of being within close proximity of the proposed well. 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 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 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 the Form 5.
23	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)
24	Final Reclamation	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.
25	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: 25 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>Att Doc Num</b>	<b>Name</b>
400466007	FORM 2 SUBMITTED
400466068	EXCEPTION LOC REQUEST
400466069	EXCEPTION LOC WAIVERS
400466381	PLAT
400466389	DIRECTIONAL DATA
400468944	OffsetWellEvaluations Data
400468945	SURFACE AGRMT/SURETY
400470271	DEVIATED DRILLING PLAN
400470272	LEGAL/LEASE DESCRIPTION
400470278	PROPOSED SPACING UNIT

Total Attach: 10 Files

## General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final Review Completed. No LGD or public comment received.	9/12/2013 10:53:46 AM
Engineer	The existing surface casing check on file is still valid and the proposed surface casing setting depth is adequate. See document number 2485501.  Evaluated offset wells for adequate coverage.	9/12/2013 10:48:58 AM
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.	8/30/2013 3:18:54 PM
Permit	Operator's request for omission of open hole logs.	8/30/2013 3:18:47 PM
Permit	Horizontal wellbore crosses lease lines within drilling and spacing unit; distance to lease line is 0'; distance to unit boundary is 460'.	8/30/2013 3:18:42 PM
Permit	Per operator added Spacing Unit : 1N-67W Sec 28 W/2E/2, Sec 33 NW/NE to comments. Added 200 acres to spacing acreage. Checked request for exception per Rule 604.b.(1).A. Added Anti-Collision & Bradenhead Monitoring BMP's. No Pre Application Notice is needed because operator is still onsite. Ok to pass.	8/30/2013 3:15:48 PM
Permit	ON HOLD: requesting spacing unit acreage and configuration. requesting addition of the Anti-Collision & Bradenhead Monitoring BMP's. Request addition of request for exception per Rule 604.b.(1).A.	8/30/2013 1:29:00 PM
Permit	Passes Completeness. Changed location number.	8/21/2013 11:50:14 AM
Permit	Returned to draft; 1)distance to lease line should be 0 2)cultural distances need to be filled in. 3)Distance to the nearest wellbore in the same formation needs to be filled in. 4)Distance to the nearest unit boundary to be filled in. 5)Operators contact email needs to be filled in. (Names won't work) 6)Cuttings disposal needs to be filled in. 7)Distance to nearest wellbore penetrating the objective formation needs to be filled in. 8)BMPS need to be filled in 9)Need comment that this re-drill is not expanding the pad and is not adding another well to pad and therefore a form 2A is not needed. 10)Location ID is not correct. 11)Most attachments have the original well name on them. This is a new well on the pad and it should have its own well name. (on all attachments)	8/19/2013 9:37:29 AM

Total: 9 comment(s)