

**APPLICATION FOR PERMIT TO:**

**Drill**       Deepen       Re-enter       Recomplete and Operate

TYPE OF WELL    OIL <input checked="" type="checkbox"/> GAS <input type="checkbox"/> COALBED <input type="checkbox"/> OTHER _____ ZONE TYPE        SINGLE ZONE <input checked="" type="checkbox"/> MULTIPLE ZONES <input type="checkbox"/> COMMINGLE ZONES <input type="checkbox"/>	Refiling <input checked="" type="checkbox"/> Sidetrack <input type="checkbox"/>
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Date Received:  
05/02/2016

Well Name: Rock Family LE      Well Number: 13-3HC

Name of Operator: GREAT WESTERN OPERATING COMPANY LLC      COGCC Operator Number: 10110

Address: 1801 BROADWAY #500

City: DENVER      State: CO      Zip: 80202

Contact Name: Callie Fiddes      Phone: (303)398-0550      Fax: (    )

Email: regulatorypermitting@gwogco.com

**RECLAMATION FINANCIAL ASSURANCE**  
Plugging and Abandonment Bond Surety ID: 20160041

**WELL LOCATION INFORMATION**

QtrQtr: SENW      Sec: 24      Twp: 1S      Rng: 66W      Meridian: 6

Latitude: 39.950956      Longitude: -104.728044

Footage at Surface: <u>2528</u> feet	FNL/FSL FNL <u>1503</u> feet	FEL/FWL FWL _____
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Field Name: WATTENBERG      Field Number: 90750

Ground Elevation: 5105      County: ADAMS

GPS Data:  
Date of Measurement: 09/05/2012    PDOP Reading: 1.7    Instrument Operator's Name: Dallas Nielsen

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

Footage at Top of Prod Zone: FNL/FSL	FEL/FWL	Bottom Hole: FNL/FSL	FEL/FWL
<u>2190</u> FNL <u>1990</u> FWL	<u>470</u> FNL <u>1990</u> FWL		
Sec: <u>24</u> Twp: <u>1S</u> Rng: <u>66W</u>	Sec: <u>13</u> Twp: <u>1S</u> Rng: <u>66W</u>		

**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.)

See Mineral Lease map.

Total Acres in Described Lease: 102 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: 1001 Feet

Building Unit: 1039 Feet

High Occupancy Building Unit: 5280 Feet

Designated Outside Activity Area: 5280 Feet

Public Road: 1510 Feet

Above Ground Utility: 1195 Feet

Railroad: 5280 Feet

Property Line: 122 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: 228 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**

\_\_\_\_\_

**OBJECTIVE FORMATIONS**

Objective Formation(s)	Formation Code	Spacing Order Number(s)	Unit Acreage Assigned to Well	Unit Configuration (N/2, SE/4, etc.)
CODELL	CODL	407-832	960	S13: All,S24:N2

**DRILLING PROGRAM**

Proposed Total Measured Depth: 14940 Feet

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

930 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: 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
CONDUCTOR	24	16	42	0	40	61	40	0
SURF	13+1/2	9+5/8	36	0	1390	429	1390	0
1ST	8+3/4	7	23	0	7961	689	7961	725
1ST LINER	6+1/8	4+1/2	11.6	7325	14940			

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 2A for this pad is still valid (submitted after August 1, 2013). The pad has not been constructed.  
We are now using oil based drilling fluid.  
We added additional BMP's to account for the necessary buffer zone mitigation measures required under rule 604.c.

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

Location ID:       437211      

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:       Callie Fiddes      

Title:       Regulatory Specialist       Date:       5/2/2016       Email:       regulatorypermitting@gwogco.c      

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:       7/28/2016      

Expiration Date:       07/27/2018      

**API NUMBER**  
05 001 09806 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 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. BERGMAN #1 API # 001-06818
	Operator acknowledges the proximity of the 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.  PETE ROCK #1 API# 001-08469; LEECH #1 API # 001-07940;
	1) Submit Form 42 electronically to COGCC 48 hours prior to MIRU 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. 2) Comply with Rule 317.j. and provide cement coverage from end of 7" to a minimum of 200' above Niobrara. Verify coverage with cement bond log.
	Approval of this refile APD does not provide relief from compliance with the COGCC Reclamation Rules.

## Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
1	Planning	Identification of P&A wells (Rule 604.c.(2)U  GWOC shall identify the location of the P&A 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. P&A wellbores shall be cutoff well below ground surface in agricultural areas to provide for landowners to safely farm the reclaimed well area.
2	Traffic control	Traffic Plan (Rule 604.c.(2)D).  GWOC works closely with all municipalities as appropriate to develop a mutually acceptable road traffic access plan addressing site specific traffic-related issues. These plans may address issues such as; routes, construction specification of access roads, maintenance, dust control, Jake brake limits, traffic controls, enforcement, emergency response, etc. GWOC will work with municipalities, the County's Planning Department and/or Road Department to address complaints related to traffic or dust issues as appropriate. Dust control measures may include surface stabilization, or dust control with appropriate chemical or water applications.

3	Odor mitigation	<p><b>Odors and Light Pollution Mitigation</b>  Where possible, drilling rig and completion equipment engine exhaust will be directed away from occupied buildings to assist in mitigating potential odors. Light sources will be directed downwards, and away from occupied structures where possible. Since this well is located over 1000' away from any building units, GWOC does not anticipate any mitigation measures will be necessary for odors, sealed tanks with pressure relief valves and emissions controls will be utilized for the production phase. Once the drilling and completion rigs leave the site, there will be no permanently installed lighting on site.</p>
4	Drilling/Completion Operations	<p><b>Drill stem tests (Rule 604.c.(2)L</b>  Conventional drill stem tests will not be conducted on DJ Basin horizontal wells currently being executed or planned by GWOC. If plans change in the future a well specific drill stem testing plan will be prepared for that particular well. Note that GWOC may elect to use one of several available wireline deployed tools for the purpose of measuring downhole formation pressures and/or collecting downhole fluid samples from the target formation(s) of a particular well.</p>
5	Drilling/Completion Operations	<p><b>Stimulation Setback (Rule 317.r and 317.s)</b>  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.</p>
6	Drilling/Completion Operations	<p><b>BOPE for well servicing (Rule 604.c.(2)J</b>  A BOPE with a minimum pressure rating of 3,000 psi will be utilized. At a minimum it will consist of 2 ram preventers and 1 annular preventer. The blind rams will be positioned below the pipe rams. A backup system of pressure control will be onsite consisting of at a minimum 1,000 psi accumulator (backup pressure). Accumulator is tested to 1,000 psi. Operator may use fixed sized pipe rams matching the tubular size. The annular preventer will be pressure tested to 250 psi low and 2,000 psi high for 10 minutes each. The ram preventers will be tested to 250 psi low and 2,500 psi high for 10 minutes each. All remaining well control equipment will be tested to 250 psi low and 2,500 psi high for 10 minutes each. The pressure tests will be conducted when the equipment is first installed and every 30 days thereafter. Pipe rams and blind rams will be function tested before every well service operation. Annual BOP inspections and pressure tests will be performed by the service company and will be charted &amp; retained for 1 year. Backup stabbing valves shall be used on operations that require reverse circulation. Valves will be pressure tested before each well service operation in low pressure and high pressure range. The GWOC onsite representative will be certified in Well Control Operations by a Well-Cap certified training service.</p>
7	Drilling/Completion Operations	<p><b>Bradenhead Monitoring</b>  GWOC will comply with the "COGCC Policy for Bradenhead Monitoring during Hydraulic Fracturing Treatments in the Greater Wattenberg Area", dated May 29, 2012</p>

8	Drilling/Completion Operations	One of the first wells drilled on the pad will be logged with open-hole Resistivity 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 id production liner if run) into the surface casing. The horizontal portion of every well will be logging with a measure-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 and number) the well in which open-hole logs were run.
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Total: 8 comment(s)

### Applicable Policies and Notices to Operators

Policy
Notice Concerning Operating Requirements for Wildlife Protection. <a href="http://cogcc.state.co.us/documents/reg/Policies/Wildlife_Notice.pdf">http://cogcc.state.co.us/documents/reg/Policies/Wildlife_Notice.pdf</a>
Policy for Bradenhead Monitoring During Hydraulic Fracturing Treatments in the Greater Wattenberg Area. <a href="http://cogcc.state.co.us/documents/reg/Policies/PolicyGwaBradenheadMonitoringFinal.pdf">http://cogcc.state.co.us/documents/reg/Policies/PolicyGwaBradenheadMonitoringFinal.pdf</a>

### Attachment Check List

Att Doc Num	Name
1696682	MINERAL LEASE MAP
401039302	FORM 2 SUBMITTED
401039398	OffsetWellEvaluations Data
401039472	DIRECTIONAL DATA
401039473	DEVIATED DRILLING PLAN
401039482	WELL LOCATION PLAT

Total Attach: 6 Files

### General Comments

User Group	Comment	Comment Date
Permit	Final Review Completed.	7/27/2016 2:34:24 PM
Permit	Attached new Mineral lease map. Changed total acreage from 640 to 102. Per operator Right to construct is Oil & Gas lease and the minerals beneath this Oil & Gas location will be developed by this well. Changed county from Weld to Adams. Permitting Review Complete.	6/16/2016 8:46:26 AM
Permit	Removed the SUA, the Exception Location request & waiver, the Exception to property line request & waiver & PSU. ON HOLD: requesting confirmation of the minerals discription and Right to construct and will the minerals beneath this Oil & Gas location will be developed by this well.	6/14/2016 4:08:48 PM
Permit	Open Hole Logging BMP submitted by operator.	6/14/2016 4:08:47 PM
Permit	A task has been opened for Engineering to review this document.	6/14/2016 8:19:32 AM
Permit	Passed completeness.	5/9/2016 10:28:00 AM
Permit	If location not built by 2A expiration 05/15/2017, operator must Refile Form 2A for approval prior to location construction.	5/9/2016 10:07:53 AM
Permit	Updated Surety Bond ID# per operator request.	5/9/2016 10:00:38 AM
Permit	Returned to draft per operator's request.	5/3/2016 8:11:59 AM

Total: 9 comment(s)