

**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 _____	Refiling <input type="checkbox"/>
ZONE TYPE    SINGLE ZONE <input checked="" type="checkbox"/> MULTIPLE ZONES <input type="checkbox"/> COMMINGLE ZONES <input type="checkbox"/>	Sidetrack <input type="checkbox"/>

Date Received: 04/13/2016

Well Name: Harper      Well Number: LD21-675

Name of Operator: NOBLE ENERGY INC      COGCC Operator Number: 100322

Address: 1625 BROADWAY STE 2200

City: DENVER      State: CO      Zip: 80202

Contact Name: Justin Garrett      Phone: (303)228 4449      Fax: (303)228 4286

Email: justin.garrett@nblenergy.com

**RECLAMATION FINANCIAL ASSURANCE**  
Plugging and Abandonment Bond Surety ID: 20030009

**WELL LOCATION INFORMATION**

QtrQtr: SWNW    Sec: 22    Twp: 9N    Rng: 58W    Meridian: 6

Latitude: 40.739350      Longitude: -103.858350

Footage at Surface: <u>1708</u> feet	FNL/FSL	FEL/FWL
<u>FNL</u> <u>330</u> feet <u>FWL</u>		

Field Name: WILDCAT      Field Number: 99999

Ground Elevation: 4776      County: WELD

GPS Data:  
Date of Measurement: 11/20/2015    PDOP Reading: 1.4    Instrument Operator's Name: Trevor Daley

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

Footage at Top of Prod Zone: <u>990</u> feet	FNL/FSL	FEL/FWL	Bottom Hole: <u>990</u> feet	FNL/FSL	FEL/FWL
<u>FNL</u> <u>330</u> feet <u>FEL</u>			<u>FNL</u> <u>330</u> feet <u>FWL</u>		

Sec: 21    Twp: 9N    Rng: 58W      Sec: 21    Twp: 9N    Rng: 58W

**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: No

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.)

T9N-R58W Sec 21: N/2

Total Acres in Described Lease: 320 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: 330 Feet

**CULTURAL DISTANCE INFORMATION**

Distance to nearest:

Building: 4441 Feet

Building Unit: 4496 Feet

High Occupancy Building Unit: 5280 Feet

Designated Outside Activity Area: 5280 Feet

Public Road: 307 Feet

Above Ground Utility: 4716 Feet

Railroad: 5280 Feet

Property Line: 330 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: 322 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary 330 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	535-715	320	Sec 21: N/2

**DRILLING PROGRAM**

Proposed Total Measured Depth: 10760 Feet

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

718 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 609

### 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? Yes

Reuse Facility ID: \_\_\_\_\_ or Document Number: 2614238

### 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	42	0	80	6	80	0
SURF	13+3/4	9+5/8	36	0	1850	535	1850	0
1ST	8+1/2	5+1/2	20	0	10760	1022		

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 Well is part of a four-well pad consisting of the proposed Harper LD21-655 (Doc #401009998), Harper LD21-662 (Doc #401010000), Harper LD21-668 (Doc #401010001), & Harper LD21-675 (Doc#401010003). This disturbance is being permitted as the LD 22-05 Pad. Wells will produce at the existing Gracie LD22-750 Multi (Loc ID 441911), which is being amended via sundry (Doc #401026528). Nearest well is the Shable LD21-68HN (API: 123-36951). Nearest non-op is the Bringelson Ranch 20-11-9-58 (API: 123-33689). Noble energy intends to permit this well as a monobore. No intermediate casing will be ran. The surface casing is set to 1,850' to cover the base of the Pierre Aquifer for OBM considerations. Oil Based Mud will be planned for the production hole interval only. Noble Energy shall isolate both the Fox Hills and Upper Pierre Aquifers with surface casing from hydrocarbon bearing zones and exposure to oil based drilling fluid. Noble Energy also agrees to not expose the UPAq to oil based mud.

This application is in a Comprehensive Drilling Plan       No       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: Justin Garrett

Title: Regulatory Analyst Date: 4/13/2016 Email: RegulatoryNotification@nblene

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: 6/21/2016

Expiration Date: 06/20/2018

<b>API NUMBER</b>
05 123 43292 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

	<p>Bradenhead tests shall be performed and reported according to the following schedule and Form 17 submitted within 10 days of each test.:</p> <ol style="list-style-type: none"><li>1) Within 60 days of rig release, prior to stimulation.</li><li>2) Approx. 6 months after rig release, prior to stimulation.</li><li>3) Within 30 days of first production, as reported on Form 5A.</li></ol>
	<ol style="list-style-type: none"><li>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.</li><li>2) Provide cement coverage to a minimum of 200' above Niobrara. Verify coverage with cement bond log.</li></ol>

## Best Management Practices

No	<u>BMP/COA Type</u>	<u>Description</u>
1	General Housekeeping	Housekeeping will consist of neat and orderly storage of materials and fluids. Wastes will be temporarily stored in sealed containers and regularly collected and disposed of at offsite, suitable facilities. If spills occur prompt cleanup is required to minimize any commingling of waste materials with stormwater runoff. Routine maintenance will be limited to fueling and lubrication of equipment. Drip pans will be used during routine fueling and maintenance to contain spills or leaks. Any waste product from maintenance will be containerized and transported offsite for disposal or recycling. There will be no major equipment overhauls conducted onsite. Equipment will be transported offsite for major overhauls. Cleanup of trash and discarded materials will be conducted at the end of each work day. Cleanup will consist of patrolling the roadway, access areas, and other work areas to pickup trash, scrap debris, other discarded materials, and any contaminated soil. These materials will be disposed of properly.
2	Storm Water/Erosion Control	Stormwater management plans (SWMP) are in place to address construction, drilling and operations associated with Oil & Gas development throughout the state of Colorado in accordance with Colorado Department of Public Health and Environment (CDPHE) General Permit No. COR- 038637. BMP's will be constructed around the perimeter of the site prior to, or at the beginning of construction. BMP's used will vary according to the location, and will remain in place and maintained until the pad reaches final reclamation.
3	Material Handling and Spill Prevention	Spill Prevention Control and Countermeasures (SPCC) plans are in place to address any possible spill associated with Oil & Gas operations throughout the state of Colorado in accordance with CFR 112.
4	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.
5	Drilling/Completion Operations	If a skid is performed for the subject well, then the only required BOPE tests are for the BOPE connection bonnet seal breaks, as long as a full BOPE test was performed at the beginning of the pad, and as long as all necessary BOPE tests are completed at least every 30 days during the pad operations. If a skid is performed for the subject well, then the only required BOPE tests are for the BOPE connection bonnet seal breaks, as long as a full BOPE test was performed at the beginning of the pad, and as long as all necessary BOPE tests are completed at least every 30 days during the pad operations.

Total: 5 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>

### Attachment Check List

Att Doc Num	Name
401010003	FORM 2 SUBMITTED
401033131	DEVIATED DRILLING PLAN
401033132	DIRECTIONAL DATA
401033134	WELL LOCATION PLAT
401033135	SURFACE AGRMT/SURETY

Total Attach: 5 Files

### General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final review complete.	6/16/2016 2:26:44 PM
Permit	Permitting task complete.	6/16/2016 1:51:23 PM
Engineer	Evaluated existing wells within 1500' of proposed directional.	4/28/2016 3:58:20 PM
Permit	Passes completeness. SUA correct and correct attachments.	4/21/2016 8:20:15 AM
Permit	Returned to draft: --SUA corrupt	4/16/2016 1:15:50 PM

Total: 5 comment(s)