

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:

400809879

## APPLICATION FOR PERMIT TO:

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

Date Received:

03/19/2015

TYPE OF WELL OIL ☒ GAS ☐ COALBED ☐ OTHER \_\_\_\_\_Refiling ☐ZONE TYPE SINGLE ZONE ☒ MULTIPLE ZONES ☐ COMMINGLE ZONES ☐Sidetrack ☐

Well Name: Wiley 23-3-97

Well Number: O-2H

Name of Operator: ENDEAVOUR OPERATING CORPORATION

COGCC Operator Number: 10411

Address: 1125 17TH STREET #1525

City: DENVER State: CO Zip: 80202

Contact Name: Mark Degenhart

Phone: (720)9790733

Fax: ( )

Email: mark.degenhart@endeavourcorp.com

## RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20120033

## WELL LOCATION INFORMATION

QtrQtr: SWSE Sec: 23 Twp: 3N Rng: 97W Meridian: 6

Latitude: 40.209747

Longitude: -108.241068

Footage at Surface: 935 feet FNL/FSL FSL 1399 feet FEL/FWL FEL

Field Name: WILDCAT

Field Number: 99999

Ground Elevation: 6023

County: RIO BLANCO

GPS Data:

Date of Measurement: 10/30/2014 PDOP Reading: 1.4 Instrument Operator's Name: K. Stewart

If well is ☐ Directional ☒ Horizontal (highly deviated) submit deviated drilling plan.
 Footage at Top of Prod Zone: FNL/FSL FSL 340 FSL 638 FEL 1980 FSL 682 FEL  
 Sec: 23 Twp: 3N Rng: 97W Sec: 26 Twp: 3N Rng: 97W

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

Surface Ownership: ☒ Fee ☐ State ☐ Federal ☐ IndianThe 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: Blanket

Surface Surety ID: 20120034

## 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.)

Skeeters, Buffalo Horn Properties, LLC, et al. Tract 16 Lease: 800 Acres

Sec. 22, Twp 3N, Rng 97W: E/2SW/4, SE/4

Sec. 23, Twp 3N, Rng 97W: NW/4SW/4, S/2S/2

Sec. 24, Twp 3N, Rng 97W: SW/4

Sec. 26, Twp 3N, Rng 97W: NE/4NE/4, SW/4

Family Real Estate Enterprises, LLC Lease: (320 acres)

Sec. 25, Twp 3N, Rng 97W: W/2SW/4

Sec. 26, Twp 3N, Rng 97W: E/2NW/4, S/2NE/4, N/2SE/4

Total Acres in Described Lease: 1120 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: 638 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: 5280 Feet

Above Ground Utility: 5280 Feet

Railroad: 5280 Feet

Property Line: 1541 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: 2620 Feet

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

Federal or State Unit Name (if appl): Wiley Unit Number: COC75390X

## 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			

## DRILLING PROGRAM

Proposed Total Measured Depth: 15236 Feet

Distance to nearest permitted or existing wellbore penetrating objective formation: 720 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: Recycle/reuse

Cuttings Disposal: ONSITE Cuttings Disposal Method: Cuttings trench

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+0/0	20+0/0	104.13	0	80			
SURF	14+3/4	9+5/8	36	0	3300	1000	3300	0
1ST	8+3/4	7+0/0	29	0	11140	1306	11140	0
1ST LINER	6+1/8	4+1/2	11.6	10370	15236	364	15236	10370

☐ 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 \_\_\_\_\_

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

Location ID: 430926

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: Brad Baum

Title: Project Manager Date: 3/19/2015 Email: bbaum@kleinfelder.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:  Director of COGCC Date: 8/25/2015

Expiration Date: 08/24/2017

### API NUMBER

05 103 12277 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

	(1) Operator shall comply with the most current revision of the Northwest Notification Policy. See attached notice.
	(2) Operator shall provide cement coverage from the intermediate casing shoe (7" first string) to a minimum of 200' above the surface casing shoe to provide isolation of all Mesa Verde group oil, gas, and water-bearing sandstone and coalbed formations that are not otherwise covered by surface casing. Verify intermediate casing cement coverage with a cement bond log.
	Passed completeness.

## Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
1	Storm Water/Erosion Control	<p>Endeavour Operating Corporation Wiley #23-3-97 O-2H SWSE Section 23-T3N-R97W Rio Blanco Co., Colorado Best Management Practices Summary</p> <p>Stormwater Management Plans (SWMP) will be in place to address construction, drilling and operations associated with Oil &amp; Gas development throughout the state of Colorado in accordance with Colorado Department of Public Health and Environment (CDPHE). BMP's will be constructed around the perimeter of the site prior to, or at the beginning of construction. The BMP's used will vary according to the location, and will remain in place until the pad reaches final reclamation.</p> <p>Spill Prevention, Control, and Countermeasures (SPCC) plans will be in place to address any possible spills associated with Oil &amp; Gas operations throughout the state of Colorado in accordance with 40 CFR 112.</p> <p>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 will be 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 will consist of patrolling the roadways, access areas, and other work areas to pick up trash, scrap debris, other discarded materials, and any contaminated soil. These materials will be disposed of properly.</p> <p>The above BMP's will be provided to all Endeavour Operating Corporation, contractors and will be posted in the company trailer located on location during drilling, completion and production operations.</p>
2	Drilling/Completion Operations	<p>The first well drilled on the Wiley 23-3-97 O-Pad (API # 05-103-11954-00, Wiley 23-3-97-1, vertical pilot hole) was logged with an open-hole resistivity log with gamma-ray from TD into the surface casing. All subsequent wells on the pad will have a cement bond log with gamma-ray run on the production casing (or intermediate casing if production liner is run). All wells on the pad will have the horizontal portion of the wellbore logged with, at minimum, measured-while-drilling log with gamma-ray. 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." The Form 5 for a well without open-hole logs shall clearly identify by API#, well name, and number gfor the well in which open-hole logs were run.</p>

Total: 2 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>
400809879	FORM 2 SUBMITTED
400817113	DIRECTIONAL DATA
400817114	DEVIATED DRILLING PLAN
400817207	WELL LOCATION PLAT

Total Attach: 4 Files

## General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Added related form 2A to related forms tab. Corrected Drilling and Waste Management to match the form 2A with Opr approval. Final review complete.	8/18/2015 2:17:28 PM
Permit	Corrected distance to property line from 1390' to 1541' as per opr. Returned to In Process.	6/22/2015 2:48:30 PM
Permit	New form 2A Doc 400835687 has been filed and is In Process.	5/9/2015 1:47:58 PM
Permit	The 2A only allows one well on this pad. Operator notified and these forms will be put on hold until the 2A is ready to pass. Corrected distance to nearest wellbore permitted/completed in same formation from 15' to 2620' as per opr. Corrected distance to nearest wellbore penetrating same formation from 15' to 720' as per opr.	5/4/2015 1:46:54 PM
Engineer	The only offset wellbores within 1500 feet are the vertical pilot and horizontal sidetrack of well Wiley #23-3-97 H1 (103-11954). Offset water well check: COGCC evaluated offset water wells within one mile of this proposed well's surface hole location. This information was used in addition to locally-available geophysical logs and hydrogeologic information to evaluate the adequacy of the operator's proposed surface casing setting depth. The deepest water well within 1 mile of the surface location is 300 feet deep. 4/20/15: Per operator, changed distance from completed portion of wellbore to nearest wellbore from 15' to 2620'. Changed distance to nearest wellbore penetrating objective formation from 15' to 720'. Per operator: CMT bottom for the surface casing is 3300 ft, CMT top for the first string is 0 ft, CMT top for the liner is 10370 and the CMT bottom is 15,236.	4/10/2015 9:26:09 AM
Permit	Missing SUA. Proposed depth rounded incorrectly - does not match imported data. Proposed depth (on Casing tab) still does not match deviated drilling plan. Return to draft.	4/8/2015 9:54:23 AM
Permit	On the Surface & Minerals tab, if the Surface Owner (SO) is committed to an oil and gas lease, then they must also be the Mineral Owner (MO). Proposed measured depth does not match deviated drilling plan. Missing 317.p BMP. Location ID required on Submit tab. Submitter is not an approved agent. Missing Surface Use Agreement (SUA). "Plat" attachment should be "Well Loc Plat" Return to draft.	4/2/2015 2:02:36 PM
Permit	1) BHL footages do not match information supplied on plat. 2) If surface owner has signed O&G lease, then previous two boxes should also be checked. 3) Deviated drilling plan missing. Please attach this document.	3/20/2015 1:11:15 PM

Total: 8 comment(s)