

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:

400810221

Date Received:

03/19/2015

APPLICATION FOR PERMIT TO:

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

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-4H

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: 40.209867

Longitude: -108.241104

Footage at Surface: 979 feet FNL/FSL FSL 1409 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: 1.6 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 FEL/FWL Bottom Hole: FNL/FSL FEL/FWL

1356 FSL 1472 FEL 1320 FSL 1458 FEL
Sec: 23 Twp: 3N Rng: 97W Sec: 14 Twp: 3N Rng: 97W

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: 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.)

The mineral lease is a mix of fee and federal leases.

Skeeters, Buffalo Horn Properties, LLC, et al. Lease: (800 acres)

Sec. 22, T3N, R97W: E/2SW/4, SE/4

Sec. 23, T3N, R97W: NW/4SW/4, S/2S/2

Sec. 24, T3N, R97W: SW/4

Sec. 26, T3N, R97W: NE/4NE/4, SW/4

John R. Pierce Trust Lease: (320 acres)

Sec. 14, T3N, R97W: E/2NW/4, W/2NE4, SE/4

Federal Lands: (1,000 acres)

Sec. 22, T3N, R97W: N/2, W/2SW/4

Sec. 23, T3N, R97W: N/2, NE/4SW/4, N/2SE/4

Sec. 24, T3N, R97W: SE/4

See attached mineral lease map.

Total Acres in Described Lease: 2120 Described Mineral Lease is: ☒ Fee ☐ State ☐ Federal ☐ Indian

Federal or State Lease # COC66386

Distance from Completed Portion of Wellbore to Nearest Lease Line of described lease: 36 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: 830 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

The top of the producing interval for the 4H is approximately 36 feet north of a lease boundary. However, the well is located within a federal unit and is fully committed to the unit lease.

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 PROGRAMProposed Total Measured Depth: 16538 FeetDistance to nearest permitted or existing wellbore penetrating objective formation: 830 Feet (Including plugged wells)Will a closed-loop drilling system be used? YesIs H₂S gas reasonably expected to be encountered during drilling operations at concentrations greater than or equal to 100 ppm? No (If Yes, attach an H₂S Drilling Operations Plan)Will salt sections be encountered during drilling? NoWill salt based (>15,000 ppm Cl) drilling fluids be used? NoWill oil based drilling fluids be used? YesBOP 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/reuseCuttings 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	10908	1281	10908	0
1ST LINER	6+1/8	4+1/2	11.60	10138	16538	459	16538	10138

☐ 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 top of the producing interval for the 4H is approximately 36 feet north of a lease boundary. However, the well is located within a federal unit and is fully committed to the unit lease.

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 12276 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. |
|--|---|

Best Management Practices

No	BMP/COA Type	Description
1	General Housekeeping	<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. Any waste product from maintenance will be containerized and transported offsite for disposal or recycling.</p> <p>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>
2	Storm Water/Erosion Control	<p>Stormwater Management Plans (SWMP) will be 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). 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>
3	Material Handling and Spill Prevention	<p>Spill Prevention, Control, and Countermeasures (SPCC) plans will be in place to address any possible spills associated with Oil & Gas operations throughout the state of Colorado in accordance with 40 CFR 112.</p> <p>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.</p>
4	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: 4 comment(s)

Applicable Policies and Notices to Operators

NW Colorado Notification Policy.

Notice Concerning Operating Requirements for Wildlife Protection.

Attachment Check List

Att Doc Num	Name
400810221	FORM 2 SUBMITTED
400810392	OffsetWellEvaluations Data
400817160	DIRECTIONAL DATA
400817162	DEVIATED DRILLING PLAN
400817184	WELL LOCATION PLAT

Total Attach: 5 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 2:17:46 PM
Permit	Corrected distance to property line from 3103' to 1541' as per opr. Return to In Process.	6/22/2015 2:51:15 PM
Permit	New form 2A Doc 400835687 has been filed and is In Process. Question distance to Property Line (distance is large compared to 2A and other well)	5/9/2015 1:47:47 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 the distance to the nearest wellbore permitted/completed from 30' to 830'. as per opr. Corrected the distance to the nearest wellbore penetrating the same formation from 30' to 830' as per opr.	5/4/2015 3:11:28 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. With operator concurrence, changed distance from completed portion of wellbore to nearest wellbore from 30' to 830'. Changed distance to nearest wellbore penetrating objective formation from 30' to 830'. CMT top for the liner is 10138.	4/22/2015 2:40:10 PM
Permit	Passed completeness.	4/14/2015 1:35:40 PM
Permit	Setting depth was not updated to reflect new MD. Return to draft.	4/9/2015 1:02:19 PM
Permit	Proposed measured depth does not match deviated drilling plan. Return to draft.	4/8/2015 10:10:46 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). Missing 317.p BMP. Location ID required on Submit tab. Submitter is not an approved agent. "Plat" attachment should be "Well Loc Plat" Return to draft.	4/2/2015 2:40:10 PM
Permit	1) H2S dropdown needs to have a value selected. 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 1:21:54 PM

Total: 10 comment(s)