

FORM
2

Rev
12/20

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:

402955105

Date Received:

02/14/2022

APPLICATION FOR PERMIT TO:

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

Amend ☐

TYPE OF WELL OIL ☒ GAS ☐ COALBED ☐ OTHER: UNPLANNED SIDETRACK

Refill ☐

ZONE TYPE SINGLE ZONE ☒ MULTIPLE ZONES ☐ COMMINGLE ZONES ☐

Sidetrack ☒

Well Name: INTERCHANGE A Well Number: S22-30-1C
Name of Operator: EXTRACTION OIL & GAS INC COGCC Operator Number: 10459
Address: 370 17TH STREET SUITE 5200
City: DENVER State: CO Zip: 80202
Contact Name: Kate Miller Phone: (303)241-6910 Fax: ()
Email: regulatory@civiresources.com

RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20130028

WELL LOCATION INFORMATION

Surface Location

QtrQtr: SWNW Sec: 10 Twp: 1S Rng: 68W Meridian: 6
Footage at Surface: 2188 Feet FNL/FSL FNL 877 Feet FEL/FWL
Latitude: 39.980646 Longitude: -104.994064
GPS Data: GPS Quality Value: 1.6 Type of GPS Quality Value: PDOP Date of Measurement: 09/28/2017
Ground Elevation: 5236
Field Name: WATTENBERG Field Number: 90750

Well Plan: is ☐ Directional ☒ Horizontal (highly deviated) ☐ Vertical

If Well plan is Directional or Horizontal attach Deviated Drilling Plan and Directional Data.

Subsurface Locations

Top of Productive Zone (TPZ)
Sec: 10 Twp: 1S Rng: 68W Footage at TPZ: 150 FNL 370 FWL
Measured Depth of TPZ: 8871 True Vertical Depth of TPZ: 8104 FNL/FSL FEL/FWL
Base of Productive Zone (BPZ)
Sec: 22 Twp: 1S Rng: 68W Footage at BPZ: 460 FSL 366 FWL
Measured Depth of BPZ: 24126 True Vertical Depth of BPZ: 8104 FNL/FSL FEL/FWL
Bottom Hole Location (BHL)
Sec: 22 Twp: 1S Rng: 68W Footage at BHL: 460 FSL 366 FWL
FNL/FSL FEL/FWL

LOCAL GOVERNMENT PERMITTING INFORMATION

County: BROOMFIELDMunicipality: N/A

Is the Surface Location of this Well in an area designated as one of State interest and subject to the requirements of §

24-65.1-108 C.R.S.? No

Per § 34-60-106(1)(f)(I)(A) C.R.S., the following questions pertain to the Relevant Local Government approval of the siting of the proposed Oil and Gas Location.

SB 19-181 provides that when "applying for a permit to drill," operators must include proof that they sought a local government siting permit and the disposition of that permit application, or that the local government does not have siting regulations. § 34-60-106(1)(f)(I)(A) C.R.S.

Does the Relevant Local Government regulate the siting of Oil and Gas Locations, with respect to this Location? ☒ Yes ☐ No☒ If yes, in checking this box, I hereby certify that an application has been filed with the local government with jurisdiction to approve the siting of the proposed oil and gas location.The disposition of the application filed with the Relevant Local Government is: Approved Date of Final Disposition: 10/24/2017Comments: The local government siting permit type is: Operator Agreement**SURFACE AND MINERAL OWNERSHIP AT WELL'S OIL & GAS LOCATION**Surface Owner of the land at this Well's Oil and Gas Location: ☒ Fee ☐ State ☐ Federal ☐ IndianMineral Owner beneath this Well's Oil and Gas Location: ☒ Fee ☐ State ☐ Federal ☐ Indian

Surface Owner Protection Financial Assurance (if applicable): _____ Surety ID Number (if applicable): _____

MINERALS DEVELOPED BY WELL

The ownership of all the minerals that will be developed by this Well is (check all that apply):

☒ Fee☐ State☐ Federal☐ Indian☐ N/A**LEASE INFORMATION**

Using standard QtrQtr, Section, Township, Range format describe one entire mineral lease as follows:

* If this Well is within a unit, describe a lease that will be developed by the Well.

* If this Well is not subject to a unit, describe the lease that will be produced by the Well.

(Attach a Lease Map or Lease Description or Lease if necessary.)

Please see mineral lease map doc # 401522848.Total Acres in Described Lease: 147 Described Mineral Lease is: ☒ Fee ☐ State ☐ Federal ☐ Indian

Federal or State Lease # _____

SAFETY SETBACK INFORMATION

Distance from Well to nearest:

Building: 1009 FeetBuilding Unit: 1013 FeetPublic Road: 500 FeetAbove Ground Utility: 868 FeetRailroad: 5280 Feet**INSTRUCTIONS:**

- Specify all distances per Rule 308.b.(1).
- 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 – as defined in 100 Series Rules.

Property Line: 415 Feet

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		1040	GWA

Federal or State Unit Name (if appl):

Unit Number:

SUBSURFACE MINERAL SETBACKS

Enter 5280 for distance greater than 1 mile.

Is this Well within a unit? Yes

If YES:

Enter the minimum distance from the Completed Zone of this Well to the Unit Boundary: 460 Feet

Enter the minimum distance from the Completed Zone of this Well to the Completed Zone of an offset Well within the same unit permitted or completed in the same formation: 367 Feet

If NO:

Enter the minimum distance from the Completed Zone of this Well to the Lease Line of the described lease: Feet

Enter the minimum distance from the Completed Zone of this Well to the Completed Zone of an offset Well producing from the same lease and permitted or completed in the same formation: Feet

Exception Location

☐ If this Well requires the approval of a Rule 401.c Exception Location, enter the Rule or spacing order number and attach the Exception Location Request and Waivers.

SPACING & FORMATIONS COMMENTS

Proposed Spacing Unit:
Section 3-1S-68W: SWSW
Section 4-1S-68W: SESE
Section 9-1S-68W: E/2E/2
Section 10-1S-68W: W/2W/2
Section 15-1S-68W: W/2W/2
Section 16-1S-68W: E/2E/2
Section 21-1S-68W: E/2E/2
Section 22-1S-68W: W/2W/2

DRILLING PROGRAM

Proposed Total Measured Depth: 24126 Feet

TVD at Proposed Total Measured Depth 8104 Feet

Distance from the proposed wellbore to nearest existing or proposed wellbore belonging to another operator, including plugged wells:

Enter distance if less than or equal to 1,500 feet: 71 Feet ☐ No well belonging to another operator within 1,500 feet

Will a closed-loop drilling system be used? Yes

Is 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 Plan unless a plan was already submitted with the Form 2A per Rule 304.c.(10).

Will there be hydraulic fracture treatment at a depth less than 2,000 feet in this well? No

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

Beneficial reuse or land application plan submitted? No

Reuse Facility ID: _____ or Document Number: _____

CASING PROGRAM

Casing Type	Size of Hole	Size of Casing	Grade	Wt/Ft	Csg/Liner Top	Setting Depth	Sacks Cmt	Cmt Btm	Cmt Top
CONDUCTOR	24	16	5-L	42	0	80	100	80	0
SURF	12+1/4	9+5/8	J-55	36	0	1637	575	1637	0
1ST	8+1/2	5+1/2	P-110	20	0	24126	3297	24126	

☐ Conductor Casing is NOT planned

POTENTIAL FLOW AND CONFINING FORMATIONS

Zone Type	Formation /Hazard	Top M.D.	Top T.V.D.	Bottom M.D.	Bottom T.V.D.	TDS (mg/L)	Data Source	Comment
Groundwater	Arapahoe	0	0	665	665	1001-10000	Groundwater Atlas	USGS HA-647 (Robson & Romero, 1981)
Groundwater	Laramie-Fox Hills	665	665	989	984	501-1000	Groundwater Atlas	USGS HA-650 (Robson et al, 1981)
Confining Layer	Pierre Shale	989	984	1332	1314			
Groundwater	Upper Pierre Aquifer	1332	1314	2155	2084	0-500	Electric Log Calculation	Sharpe 2-10 (05-014-08876 -0000)
Confining Layer	Pierre Shale	2155	2084	4835	4614			
Hydrocarbon	Parkman	4835	4614	4987	4754			
Confining Layer	Pierre Shale	4987	4754	5218	4974			
Hydrocarbon	Sussex	5218	4974	5495	5234			
Confining Layer	Pierre Shale	5495	5234	5707	5434			
Confining Layer	Pierre Shale	5578	5504	7982	7614			
Hydrocarbon	Shannon	5707	5434	5578	5504			
Subsurface Hazard	Sharon Springs	7982	7614	8067	7670			
Hydrocarbon	Niobrara	8067	7670	8653	8088			
Hydrocarbon	Carlile	8175	8128	8768	8206			Did not enter formation, depths estimated
Hydrocarbon	Ft Hays	8653	8088	8751	8111			
Hydrocarbon	Codell	8751	8111	23786	8175			Did not exit formation, bottom of zone = MD/TVD @ TD of well

OPERATOR COMMENTS AND SUBMITTAL

Comments

The form 2 is being submitted for an unplanned sidetrack: The BHL and direction plan will remain the same as the original permit.

Explanation of the situation that has resulted in the need to sidetrack: While attempting to to drill the curve section, we were not able to maintain the desired build rate. As we unsuccessfully attempted to correct back to plan, we identified that we would land well into the Carlile formation upon landing the curve. As a result, we projected we would need to make severe directional adjustments to get back into the target Codell formation.

Total measured depth reached in the wellbore being plugged back: 8,612' MD

Casing set – size(s) and measured depth(s):. No casing set.

Description of fish in the hole (if any) – including top and bottom measured depths: None

Description of proposed plugs: setting measured depths, heights, and cement volumes: None

Type of cement to be used for all plugs, including slurry weight (ppg) and yield (cf/sk): None

Measured depth of proposed sidetrack kick-off point: 5,420' MD

Proposed objective formation(s) for sidetrack hole: Codell

BHL target for sidetrack hole: Same BHL target as original wellbore.

This application is in a Comprehensive Area Plan No CAP #: _____

OGDP ID#: _____ OGDP Name: _____ Expiration Date: _____

Location ID: 456747 Location Name: Interchange A & B Pad

I hereby certify all statements made in this form are, to the best of my knowledge, true, correct, and complete.

Signed: _____ Print Name: Ashley Noonan

Title: Sr. Regulatory Analyst Date: 2/14/2022 Email: regulatory@civiresources.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, applicable orders, and SB 19-181 and is hereby approved.

COGCC Approved:  Director of COGCC Date: 2/17/2022

Expiration Date: 02/16/2025

API NUMBER

05 014 20850 01

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.

Condition of Approval

COA Type

Description

0 COA

Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
1	Drilling/Completion Operations	Anti-collision: Operator will perform an anti-collision evaluation of all active (producing, shut in, or temporarily abandoned) offset wellbores that have the potential of being within 150 feet of a proposed well prior to drilling operations for the proposed well. Notice shall be given to all offset operators prior to drilling.
2	Drilling/Completion Operations	Operator acknowledges and will comply with COGCC policy for Bradenhead Monitoring during Hydraulic Fracturing treatments in the Greater Wattenberg Area dated May 29, 2012.
3	Drilling/Completion Operations	Alternative Logging Program: 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 state "Alternative Logging Program - No open-hole logs were run and shall clearly identify the type of log and the well (by API#) in which open-hole logs were run.

Total: 3 comment(s)

Attachment List

<u>Att Doc Num</u>	<u>Name</u>
2341327	WELLBORE DIAGRAM
402955105	FORM 2 SUBMITTED
402955107	OffsetWellEvaluations Data
402955297	CORRESPONDENCE

Total Attach: 4 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final Review Completed.	02/16/2022
OGLA	The Oil and Gas Location, its associated Form 2A materials, and the Form 2 Application for Permit to Drill were fully reviewed and approved prior to the commencement of drilling operations for this well. Because this is an application for an unplanned sidetrack with drilling in progress, an Oil and Gas Location Assessment review is not applicable to this ongoing operation.	02/15/2022
Permit	The following corrections were made with operator concurrence: Corrected well location information to match the permitted well plat. Corrected question on the local government tab to NO Corrected Submit tab comment Attached wellbore diagram provided by the operator	02/14/2022

Total: 3 comment(s)