

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:

402518587

(SUBMITTED)

Date Received:

04/09/2021

APPLICATION FOR PERMIT TO:

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

Amend ☐

TYPE OF WELL OIL ☒ GAS ☐ COALBED ☐ OTHER: _____

Refile ☒

ZONE TYPE SINGLE ZONE ☒ MULTIPLE ZONES ☐ COMMINGLE ZONES ☐

Sidetrack ☐

Well Name: Kodak South FD Well Number: 28-339HC
Name of Operator: GREAT WESTERN OPERATING COMPANY LLC COGCC Operator Number: 10110
Address: 1001 17TH STREET #2000
City: DENVER State: CO Zip: 80202
Contact Name: Megan Conner Phone: (720)595-2124 Fax: ()
Email: mconner@gwp.com

RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20160041

WELL LOCATION INFORMATION

Surface Location

QtrQtr: SESW Sec: 26 Twp: 6N Rng: 67W Meridian: 6
Footage at Surface: 646 Feet FSL 1859 Feet FWL
Latitude: 40.452469 Longitude: -104.863664
GPS Data: GPS Quality Value: 1.2 Type of GPS Quality Value: PDOP Date of Measurement: 06/29/2016
Ground Elevation: 4743
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: 26 Twp: 6N Rng: 67W Footage at TPZ: 940 FSL 856 FWL
Measured Depth of TPZ: 7578 True Vertical Depth of TPZ: 7093 FNL/FSL FEL/FWL

Base of Productive Zone (BPZ)

Sec: 28 Twp: 6N Rng: 67W Footage at TPZ: 949 FSL 470 FWL
Measured Depth of TPZ: 18392 True Vertical Depth of TPZ: 7093 FNL/FSL FEL/FWL

Bottom Hole Location (BHL)

Sec: 28 Twp: 6N Rng: 67W Footage at BHL: 949 FSL 370 FWL
FNL/FSL FEL/FWL

LOCAL GOVERNMENT PERMITTING INFORMATION

County: WELD

Municipality: 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.? Yes

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: Waived Date of Final Disposition: _____

Comments: The Form 2A for this facility was originally approved on 12/11/2014, an amended Form 2A was approved on 04/03/2015, an amended Form 2A was submitted on 01/04/2017 and approved on 05/02/2018. The effective date of the 1041 WOGLA Permit Process was 02/01/2017, therefore the local government does not precede the COGCC in siting determination at this location.

Additionally, the Weld County LGD left the following comment on the Kodak South FD Pad (Location ID: 306149) approved Form 2A (Document Number 401163313).

"This proposed oil and gas facility is located in unincorporated Weld County in the Industrial (I-1) Zoned District. As of today's date, January 27, 2017, the Weld County Oil and Gas Liaison/LGD has not been contacted by any nearby resident(s) or governmental jurisdiction(s) regarding this proposed location. The County will respond to legitimate concerns or issues regarding proposed locations and attempt to facilitate a solution with the operator. Prior to a recent code change Oil Gas Production Facilities in the Industrial Zoned District were an allowed use with no Site Plan Review required. The COGCC Form 2A for this location was submitted on or before February 1, 2017. The proposed use remains a Use by Right with no Weld Oil and Gas Location Assessment (WOGLA) required. A building permit is required for the production facilities (tank battery, separators, pump jacks, compressors, generators, etc.) and the operator has a Flood Hazard Development Permit (FHDP15-0067) from the Department of Planning Services. Troy Swain, Weld Oil/Gas Liaison and LGD (970) 400-3579."

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 ☐ Indian

Mineral 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.)

Irregular lease, see attached map.

Total Acres in Described Lease: 316

Described Mineral Lease is: ☒ Fee ☐ State ☐ Federal ☐ Indian

Federal or State Lease # _____

SAFETY SETBACK INFORMATION

Distance from Well to nearest:

Building: 537 Feet
Building Unit: 713 Feet
Public Road: 488 Feet
Above Ground Utility: 741 Feet
Railroad: 837 Feet
Property Line: 556 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.

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 | 407-3195 | 712 | T6N-R67W; Sec 26: W1/2 SW1/4; Sec 27: S1/2; Sec 28: S1/2 |

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: 209 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

DRILLING PROGRAMProposed Total Measured Depth: 18492 FeetTVD at Proposed Total Measured Depth 18492 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: 294 Feet ☐ No well belonging to another operator within 1,500 feetWill a closed-loop drilling system be used? YesIs H₂S gas reasonably expected to be encountered during drilling operations at concentrations greater thanor 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? NoWill 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

Beneficial reuse or land application plan submitted? _____

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 |
|-------------|--------------|----------------|---------|-------|---------------|---------------|-----------|---------|---------|
| SURF | 13+1/2 | 9+5/8 | J-55 | 36 | 0 | 2000 | 844 | 2000 | 0 |
| 1ST | 8+1/2 | 5+1/2 | HCP-110 | 20 | 0 | 18492 | 2520 | 18492 | 3300 |

☒ 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 | Fox Hills | 0 | 0 | 464 | 464 | 501-1000 | USGS | USGS WSP 2302 |
| Confining Layer | Pierre Fm | 464 | 464 | 793 | 793 | | | |
| Groundwater | Upper Pierre Aquifer | 793 | 793 | 1134 | 1134 | 501-1000 | Other | COGCC Project #2141 |
| Confining Layer | Pierre Fm | 1134 | 1134 | 3441 | 3441 | | | |
| Hydrocarbon | Parkman | 3441 | 3441 | 3790 | 3790 | | | |
| Confining Layer | Pierre Fm | 3790 | 3790 | 3968 | 3968 | | | |
| Hydrocarbon | Sussex | 3968 | 3968 | 4230 | 4230 | | | |
| Confining Layer | Pierre Fm | 4230 | 4230 | 4526 | 4526 | | | |
| Hydrocarbon | Shannon | 4526 | 4526 | 4604 | 4604 | | | |
| Confining Layer | Pierre Fm | 4604 | 4604 | 6712 | 6641 | | | |
| Confining Layer | Sharon Springs | 6712 | 6641 | 6806 | 6724 | | | |
| Hydrocarbon | Niobrara | 6806 | 6724 | 7346 | 7055 | | | |
| Confining Layer | Ft Hayes | 7346 | 7055 | 7421 | 7075 | | | |
| Hydrocarbon | Codell | 7421 | 7075 | 18492 | 7099 | | | Potential Flow Formation Table: The TVD of the deepest hydrocarbon zone is the bottom of the well and not the bottom of the formation. The formation is not planned to be exited. |

OPERATOR COMMENTS AND SUBMITTAL

| | |
|----------|--|
| Comments | <p>Distance from completed portion of the wellbore to nearest wellbore permitted or completed in the same formation was measured in 3D to the proposed Kodak South FD 28-339HN.</p> <p>Distance from the proposed wellbore to nearest existing or proposed wellbore belonging to another operator, including plugged and abandoned wells, was measured to the POUDRE 15-28, API No 05-123-26630, SI Status, owned by Kerr McGee Oil & Gas Onshore LP, and is measured using in-house 3D anti-collision reports.</p> <p>The API is being reused from a previously submitted Kodak South APD. Some aspect of the wellbore are changing including the TPZ and BHL, Spacing Order, TD, drilling and casing program, offset well evaluation, Operator BMPs, well name, and attachments.</p> <p>Great Western has requested an open hole logging exception to Rule 408.r for the proposed well. The 408.r exception request is attached.</p> |
|----------|--|

This application is in a Comprehensive Area Plan _____ CAP #: _____

Oil and Gas Development Plan Name _____ OGDID #: _____

Location ID: 306149

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

Signed: _____ Print Name: Megan Conner

Title: Regulatory Analyst Date: 4/9/2021 Email: regulatorypermitting@gwp.com

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: _____

Expiration Date: _____

| |
|---|
| <p>API NUMBER</p> <p>05 123 40805 00</p> |
|---|

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 |
|----------|-------------|
| | |

Best Management Practices

| No | BMP/COA Type | Description |
|-----------|--------------------------------|--|
| 1 | Drilling/Completion Operations | Drill Stem Tests – Rule 603.g Conventional drill stem tests will not be conducted on DJ Basin horizontal wells currently being executed or planned by Great Western. If plans change in the future a well specific drill stem testing plan will be prepared for that particular well. Note that Great Western may elect to use one of several available wireline deployed tools for the purpose of measuring down hole formation pressures and/or collecting down hole fluid samples from the target formation(s) of a particular well. |
| 2 | Drilling/Completion Operations | Wellbore Collision Prevention – Rule 408.t Prior to drilling operations, Great Western 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 well path with its respective error of uncertainty. If current surveys do not exist for the offset wells, Operator may have gyro surveys conducted to verify bottom hole 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. |
| 3 | Drilling/Completion Operations | Stimulation Setback – Rule 408.u Great Western shall obtain signed written consent for any portion of the proposed wellbore's treated interval within 150' of an existing (producing, Shut-in, or temporarily abandoned) or permitted oil and gas well's treated interval belonging to another operator prior to completion of the well. |
| 4 | Drilling/Completion Operations | Bradenhead Monitoring Great Western will comply with Rule 419 and Order 1-232 for all Bradenhead compliance, as applicable. |
| 5 | Drilling/Completion Operations | Multi Well Open-Hole Logging – Rule 408.r Alternative Logging Program: One of the first wells already drilled on this pad (Kodak South FD 25-241HC, API 05-123-44116) has a triple combination open hole resistivity log with gamma ray in the well file. All additional proposed wells will have a cement bond log with gamma ray run from the intermediate casing shoe, or as close as possible, to above surface casing shoe to verify the setting depth of surface casing and aquifer coverage. The horizontal portion of all subject wells will be logged while drilling with a gamma ray tool. The Form 5 for each well shall clearly state, "No open hole logs were run" and shall reference the Rule 408.r Exception granted for the well. The Form 5 for each well on the pad will identify the well that was logged with alternative logs by API number, well name and well number. |

Total: 5 comment(s)

Attachment List

| Att Doc Num | Name |
|--------------------|-----------------------------|
| 402524668 | WELL LOCATION PLAT |
| 402533432 | MINERAL LEASE MAP |
| 402535100 | DIRECTIONAL DATA |
| 402645155 | DEVIATED DRILLING PLAN |
| 402652043 | OPEN HOLE LOGGING EXCEPTION |
| 402652047 | OffsetWellEvaluations Data |

Total Attach: 6 Files

General Comments

| <u>User Group</u> | <u>Comment</u> | <u>Comment Date</u> |
|-------------------|----------------|---------------------|
| | | Stamp Upon Approval |

Total: 0 comment(s)



Public Comments

No public comments were received on this application during the comment period.

