FORM 2 Rev 08/16

State of Colorado
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109

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Date Received: 07/28/2017

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: H-C Well Number: 1-7

Name of Operator: SHAKESPEARE OIL CO INC COGCC Operator Number: 77500

Address: 202 WEST MAIN ST

City: SALEM State: IL Zip: 62881

Contact Name: A TOBIAS ECK Phone: (316)305-0572 Fax: (618)548-1594

Email: TOBY@SHAKESPEARE-OIL.COM

RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20150077

WELL LOCATION INFORMATION

QtrQtr: NESW Sec: 7 Twp: 33S Rng: 41W Meridian: 6

Latitude: 37.183840 Longitude: -102.089570

Footage at Surface: 2035 Feet FNL/FSL FSL 1591 Feet FEL/FWL FWL

Field Name: WILDCAT Field Number: 99999

Ground Elevation: 3732 County: BACA

GPS Data:

Date of Measurement: 07/17/2017 PDOP Reading: 2.1 Instrument Operator's Name: ELIJAH FRANE

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

Sec: Twp: Rng: Sec: Twp: Rng:

LOCATION SURFACE & MINERALS & RIGHT TO CONSTRUCT

Surface Ownership: ☒ Fee ☐ State ☐ Federal ☐ Indian

The Surface Owner is: (check all that apply)
- ☒ is the mineral owner beneath the location.
- ☒ 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: 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.)

SW/4 7-33S-41W

Total Acres in Described Lease: 160 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: 620 Feet

CULTURAL DISTANCE INFORMATION

Distance to nearest:

Building:	2110	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:	605	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: 5280 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary 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.)
CHEROKEE	CHRK			
LANSING-KANSAS CITY	LGKC			
MARMATON	MRTN			
MISSISSIPPIAN	MSSP			
MORROW	MRRW			
TOPEKA	TOPK			
TORONTO	TORON			

DRILLING PROGRAM

Proposed Total Measured Depth: 5000 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: _____ Feet ☒ No well belonging to another operator within 1,500 feet

Will a closed-loop drilling system be used? Yes

Is H_2S 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? No

Will salt based (>15,000 ppm Cl) drilling fluids be used? No

Will oil based drilling fluids be used? No

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:

WATER-BASED BENTONITIC DRILLING FLUIDS, AS WELL AS CUTTINGS WILL BE HAULED TO A COMMERCIAL DISPOSAL SITE.

Beneficial reuse or land application plan submitted? _____

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
SURF	12+1/4	8+5/8	24	0	1400	700	1400	0
1ST	7+7/8	5+1/2	15.5	0	5000	360	5000	2750

☒ 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 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: A TOBIAS ECK

Title: EXPLORATION GEOLOGIST Date: 7/28/2017 Email: TOBY@SHAKESPEARE-

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: 11/24/2017

Expiration Date: 11/23/2019

API NUMBER

05 009 06680 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
	Casing: Proposed cement top 3500' is below top of Topeka, which is produced 1-2 miles W and NE. Top of Topeka was 762' SS in offset well 009-06102, RD JONES #1. Changed cement top to 2750' and cement quantity to 360 sks. See COA #2. Deepest WW's within 2 miles 400-450'. Added dry hole plug at 600'. See COA #3
	Bradenhead tests shall be performed and reported according to the following schedule and Form 17 submitted within 10 days of each test.: 1) All: Within 60 days of rig release, prior to stimulation. 2) Delayed completion: 6 months after rig release, prior to stimulation. 3) All: Within 30 days of first production, as reported on Form 5A.
	1) Provide 48 hour notice prior to spud via electronic Form 42. 2) Provide cement coverage to a minimum of 200' above Topeka. Verify coverage with cement bond log. 3) If dry hole, set 40 sk cement 50’ above Topeka, 40 sks cement across any DST w/ oil or gas show, 50 sks cement from 50’ below to 50’ above surface casing shoe, 40 sks at 600', 15 sks cement top of surface casing, cut 4’ below GL, weld on plate, or set dry hole marker, 5 sks cement in rat hole & 5 sks cement in mouse hole.

Best Management Practices

No	BMP/COA Type	Description
1	Planning	• Conduct Initial Site Assessment o Identification of nearby water bodies o Identification of vegetation types o Identification of protected wildlife species o Identification of potential access routes to minimize disturbances o Identification of nearby improvements
2	Pre-Construction	• Preparation of a Storm Water Pollution Prevention Plan. Acquisition of a Storm Water Discharge Permit • Consultation with the surface landowner or appointed agent • Finalize access routes • Finalize well pad location to minimize surface grade impacts • Finalize well pad layout to minimize disturbances • Develop wildlife management plan if protected species are present
3	General Housekeeping	• Drilling and production operations conducted in safe, workmanlike manner. Safety expectations include good housekeeping. • During drilling/completion operations, debris stored in caged container which is removed from the site. • During production operations, the lease is inspected daily by Shakespeare personnel.
4	Wildlife	• Development and implementation of a Wildlife Management Plan if protected species are present
5	Storm Water/Erosion Control	• During drilling / completion operations, implementation of Storm Water Pollution Prevention Plan • Following drilling/completion operations, prompt reclamation of disturbed areas • During production operations, implementation of Shakespeare's Post Construction Storm Water Management Program

6	Material Handling and Spill Prevention	• During drilling/completion operations, storage areas graded towards pit • During production operations, implementation of Spill Prevention, Control and Countermeasure Plan & daily inspection • All stock and produced water tanks have secondary containment
7	Construction	• Access road, well pad and pit disturbances minimized • Soils segregated by type to facilitate reclamation • Storm water controls deployed and routinely inspected
8	Drilling/Completion Operations	• Per Rule 317.p: Open-hole Resistivity Log with Gamma Ray Log will be run from TD into the surface casing. A Cement Bond Log with Gamma-Ray will be run on production casing, or on intermediate casing if a production liner is run. The Form 5, Completion Report, will list all logs run and have those logs attached. • Implement Storm Water Pollution Prevention Plan, including routine inspections and evaluation of effectiveness • Locate tank batteries at safe distance from public roadways and railhead • Full containment for stock tanks and separators • Installation of pipelines in common trenches when practical • Installation of pipelines at right angles to water bodies (drainages, wetlands, perennial water bodies) where practical
9	Drilling/Completion Operations	SITE SPECIFIC Per ephemeral stream 16,443 feet northwest of proposed well pad – structural practices will be implemented at the site to minimize erosion and sediment transport. Practices may include but are not limited to: straw bales, wattles/sediment control logs, silt fences, earth dikes, drainage swales, sediment traps, subsurface drains, pipe slope drains, inlet protection, outlet protection, gabions, and temporary sediment basins.
10	Interim Reclamation	• Debris and waste material removed • Areas not in use reclaimed promptly; pits closed using segregated material; well pad and other compacted surfaces ripped • Noxious weeds controlled
11	Final Reclamation	• All equipment and debris removed • All remaining disturbed areas, including access roads, reclaimed • Noxious Weed Control Plan developed if appropriate

Total: 11 comment(s)

Applicable Policies and Notices to Operators

Policy
Notice Concerning Operating Requirements for Wildlife Protection. http://cogcc.state.co.us/documents/reg/Policies/Wildlife_Notice.pdf

Attachment Check List

Att Doc Num	Name
401345164	FORM 2 SUBMITTED
401357470	WELL LOCATION PLAT

Total Attach: 2 Files

General Comments

User Group	Comment	Comment Date
Permit	Final Review Completed. No LGD or public comment received.	11/22/2017
Permit	No related 2A is in process. --2A in process 9/11/2017.	09/04/2017
Permit	Passed Completeness.	08/07/2017

Total: 3 comment(s)