

APPLICATION FOR PERMIT TO:

Drill Deepen Re-enter Recomplete and Operate

Date Received:
05/08/2018

TYPE OF WELL OIL GAS COALBED OTHER _____

ZONE TYPE SINGLE ZONE MULTIPLE ZONES COMMINGLE ZONES

Refiling
Sidetrack

Well Name: JACK CREEK Well Number: 1

Name of Operator: ST CROIX OPERATING INC COGCC Operator Number: 81490

Address: P O BOX 13799

City: DENVER State: CO Zip: 80201

Contact Name: PAUL GOTTLÖB Phone: (720)420-5747 Fax: ()

Email: paul.gottlob@iptenergyservices.com

RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20000108

WELL LOCATION INFORMATION

QtrQtr: SENE Sec: 4 Twp: 2S Rng: 51W Meridian: 6

Latitude: 39.911610 Longitude: -103.089220

Footage at Surface: 2038 Feet FNL/FSL FNL 600 Feet FEL/FWL FEL

Field Name: WILDCAT Field Number: 99999

Ground Elevation: 4597 County: WASHINGTON

GPS Data:
Date of Measurement: 05/07/2018 PDOP Reading: 2.2 Instrument Operator's Name: ADAM SHORT

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: 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: _____ 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.)

NE/4 SEC 4-T2S-R51W

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: 600 Feet

CULTURAL DISTANCE INFORMATION

Distance to nearest:

Building: 743 Feet
 Building Unit: 912 Feet
 High Occupancy Building Unit: 5280 Feet
 Designated Outside Activity Area: 5280 Feet
 Public Road: 590 Feet
 Above Ground Utility: 985 Feet
 Railroad: 5280 Feet
 Property Line: 600 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: 05/04/2018

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: 2386 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.)
D SAND	DSND			
DAKOTA	DKTA			
J SAND	JSND			

DRILLING PROGRAM

Proposed Total Measured Depth: 4500 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 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? 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: ONSITE Drilling Fluids Disposal Methods: Land application

Cuttings Disposal: OFFSITE Cuttings Disposal Method: Commercial Disposal

Other Disposal Description:

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	23	0	470	320	470	0
1ST	7+7/8	5+1/2	15.5	0	4500	200	4500	3200

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 If this well is productive the Facility part of this pad will be built.

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: PAUL GOTTLÖB

Title: Regulatory & Engin. Tech. Date: 5/8/2018 Email: paul.gottlob@iptenergyservices

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: 6/22/2018

Expiration Date: 06/21/2020

API NUMBER
05 121 11078 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.

<u>COA Type</u>	<u>Description</u>
	This Permit to Drill is approved subject to all the BMPs and COAs on the most recently approved Form 2A and any subsequently approved Form 4 for the Oil and Gas Location. The most recently approved Form 2A and any subsequent Form 4s containing applicable COAs for this location shall be posted onsite during construction, drilling, and completions operations.
	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 hr notice prior to spud via electronic Form 42. 2) If completed, provide cement coverage from TD to a minimum of 200' above D-Sand. Verify coverage with cement bond log. 3) If dry hole, set 60 sks cement at top of J-Sand to 100' above D-Sand, 40 sks cement 50' above Niobrara top, 50 sks cement ½ out, ½ in surface casing, 15 sks cement top of surface casing, cut 4' below GL, weld on plate, 5 sks cement in rat hole & 5 sks cement in mouse hole.

Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
1	Drilling/Completion Operations	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.
2	Drilling/Completion Operations	Rule 604.c.(2)J.ii Backup stabbing valves be required on well servicing operations during reverse circulation. Valves shall be pressure tested before each well servicing operation using both low-pressure air and high-pressure fluid.
3	Drilling/Completion Operations	Rule 604.c.(2)I. RULE 604.c.I: Upon initial rig-up and at least once every thirty (30) days during drilling operations thereafter, pressure testing of the casing string and each component of the blowout prevention equipment including flange connections shall be performed to seventy percent (70%) of working pressure or seventy percent (70%) of the internal yield of casing, whichever is less. Pressure testing shall be conducted and the documented results shall be retained by the operator for inspection by the Director for a period of one (1) year. Activation of the pipe rams for function testing shall be conducted on a daily basis when practicable.
4	Drilling/Completion Operations	Rule 604.c.(2)L. Closed chamber drill stem tests shall be allowed. All other drill stem tests shall require approval by the Director. DST's are planned for this well and results will be submitted with the Form 5 Completion Report (this will not be a closed chamber DST).
5	Drilling/Completion Operations	Rule 604.c.(2).O. Drilling and Completion-All loadlines shall be bullplugged or capped.

Total: 5 comment(s)

Applicable Policies and Notices to Operators

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

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
401632238	FORM 2 SUBMITTED
401634291	WELL LOCATION PLAT

Total Attach: 2 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
OGLA	Removed the Drilling Pit reference from the Waste Management Program - OTHER DISPOSAL DESCRIPTION. Changed Drill Cuttings Disposal to OFFSITE and COMMERCIAL DISPOSAL.	06/22/2018
Permit	Final review complete.	06/22/2018
Permit	Corrections made with Operator concurrence: - Changed Drilling Fluids Disposal from OFFSITE to ONSITE per associated OGLA-approved change on the 2A. - Changed Closed Loop from NO to YES on Drilling tab per associated OGLA-approved change on the 2A. - Updated language of open-hole logging BMP to conform with guidance.	06/22/2018
Permit	Final Review Completed.	06/01/2018
Permit	Passed completeness.	05/09/2018

Total: 5 comment(s)