

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: 400837750 (REJECTED) Date Received: 06/02/2015																																						
APPLICATION FOR PERMIT TO:																																									
<input checked="" type="checkbox"/> Drill <input type="checkbox"/> Deepen <input type="checkbox"/> Re-enter <input type="checkbox"/> Recomplete and Operate																																									
TYPE OF WELL OIL <input checked="" type="checkbox"/> GAS <input type="checkbox"/> COALBED <input type="checkbox"/> OTHER _____		Refiling <input type="checkbox"/>																																							
ZONE TYPE SINGLE ZONE <input checked="" type="checkbox"/> MULTIPLE ZONES <input type="checkbox"/> COMMINGLE ZONES <input type="checkbox"/>		Sidetrack <input type="checkbox"/>																																							
Well Name: <u>Cox</u>		Well Number: <u>5</u>																																							
Name of Operator: <u>EXTRACTION OIL & GAS LLC</u>		COGCC Operator Number: <u>10459</u>																																							
Address: <u>1888 SHERMAN ST #200</u>																																									
City: <u>DENVER</u>		State: <u>CO</u>	Zip: <u>80203</u>																																						
Contact Name: <u>Jeff Annable</u>		Phone: <u>(303)928-7128</u>	Fax: <u>(303)218-5678</u>																																						
Email: <u>regulatory@petro-fs.com</u>																																									
RECLAMATION FINANCIAL ASSURANCE Plugging and Abandonment Bond Surety ID: <u>20130028</u>																																									
WELL LOCATION INFORMATION QtrQtr: <u>NENW</u> Sec: <u>22</u> Twp: <u>12N</u> Rng: <u>64W</u> Meridian: <u>6</u> Latitude: <u>40.998636</u> Longitude: <u>-104.534691</u> <table style="width:100%; border: none;"> <tr> <td style="text-align: center;">Footage at Surface:</td> <td style="text-align: center;"><u>882</u></td> <td style="text-align: center;">feet</td> <td style="text-align: center;">FNL/FSL</td> <td style="text-align: center;"><u>2233</u></td> <td style="text-align: center;">feet</td> <td style="text-align: center;">FEL/FWL</td> </tr> <tr> <td></td> <td style="text-align: center;"><u>FNL</u></td> <td></td> <td></td> <td style="text-align: center;"><u>FWL</u></td> <td></td> <td></td> </tr> </table> Field Name: <u>WILDCAT</u> Field Number: <u>99999</u> Ground Elevation: <u>5556</u> County: <u>WELD</u> GPS Data: Date of Measurement: <u>05/05/2015</u> PDOP Reading: <u>1.5</u> Instrument Operator's Name: <u>Ben Hardenbergh</u> If well is <input type="checkbox"/> Directional <input checked="" type="checkbox"/> Horizontal (highly deviated) submit deviated drilling plan. <table style="width:100%; border: none;"> <tr> <td style="text-align: center;">Footage at Top of Prod Zone:</td> <td style="text-align: center;">FNL/FSL</td> <td style="text-align: center;">FEL/FWL</td> <td style="text-align: center;">Bottom Hole:</td> <td style="text-align: center;">FNL/FSL</td> <td style="text-align: center;">FEL/FWL</td> </tr> <tr> <td style="text-align: center;"><u>300</u></td> <td style="text-align: center;"><u>FNL</u></td> <td style="text-align: center;"><u>600</u></td> <td style="text-align: center;"><u>300</u></td> <td style="text-align: center;"><u>FSL</u></td> <td style="text-align: center;"><u>600</u></td> </tr> <tr> <td></td> <td style="text-align: center;"><u>FNL</u></td> <td style="text-align: center;"><u>FWL</u></td> <td></td> <td style="text-align: center;"><u>FNL</u></td> <td style="text-align: center;"><u>FWL</u></td> </tr> <tr> <td style="text-align: center;">Sec: <u>23</u></td> <td style="text-align: center;">Twp: <u>12N</u></td> <td style="text-align: center;">Rng: <u>64W</u></td> <td style="text-align: center;">Sec: <u>26</u></td> <td style="text-align: center;">Twp: <u>12N</u></td> <td style="text-align: center;">Rng: <u>64W</u></td> </tr> </table>				Footage at Surface:	<u>882</u>	feet	FNL/FSL	<u>2233</u>	feet	FEL/FWL		<u>FNL</u>			<u>FWL</u>			Footage at Top of Prod Zone:	FNL/FSL	FEL/FWL	Bottom Hole:	FNL/FSL	FEL/FWL	<u>300</u>	<u>FNL</u>	<u>600</u>	<u>300</u>	<u>FSL</u>	<u>600</u>		<u>FNL</u>	<u>FWL</u>		<u>FNL</u>	<u>FWL</u>	Sec: <u>23</u>	Twp: <u>12N</u>	Rng: <u>64W</u>	Sec: <u>26</u>	Twp: <u>12N</u>	Rng: <u>64W</u>
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LOCATION SURFACE & MINERALS & RIGHT TO CONSTRUCT Surface Ownership: <input checked="" type="checkbox"/> Fee <input type="checkbox"/> State <input type="checkbox"/> Federal <input type="checkbox"/> Indian The Surface Owner is: <input checked="" type="checkbox"/> is the mineral owner beneath the location. (check all that apply) <input checked="" type="checkbox"/> is committed to an Oil and Gas Lease. <input checked="" type="checkbox"/> has signed the Oil and Gas Lease. <input type="checkbox"/> is the applicant. The Mineral Owner beneath this Oil and Gas Location is: <input checked="" type="checkbox"/> Fee <input type="checkbox"/> State <input type="checkbox"/> Federal <input type="checkbox"/> Indian The Minerals beneath this Oil and Gas Location will be developed by this Well: <u>No</u> The right to construct the Oil and Gas Location is granted by: <u>Surface Use Agreement</u> 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.)

Township 12 North, Range 63 West of the 6th PM
Section 20: All
Section 32: All
Township 11 North, Range 63 West of the 6th PM
Section 5: N2
Township 12 North, Range 64 West of the 6th PM
Section 22: S2 and NE4
Section 25: SW4
Section 26: All
Section 27: N2
Section 34: N2

Total Acres in Described Lease: 3523 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: 0 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: 372 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: 962 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary 300 Feet (Enter 5280 for distance greater than 1 mile.)

Federal or State Unit Name (if appl): _____ Unit Number: _____

SPACING & FORMATIONS COMMENTS

The nearest Wellbore Permitted or Completed in the same formation is the Resolution 12-64-35-2CH API #05-123-40766.

Section 14: Lots 1-4 (approx. 22.08 acres) (Portions lying within the State of Colorado)
Section 23: All
Section 26: All

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	421-46	1280	T12N,R64W:Sec 23,26

DRILLING PROGRAM

Proposed Total Measured Depth: 18930 Feet

Distance to nearest permitted or existing wellbore penetrating objective formation: 962 Feet (Including plugged wells)

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: OFFSITE Drilling Fluids Disposal Methods: Land application

Cuttings Disposal: ONSITE Cuttings Disposal Method: Other

Other Disposal Description:

Cuttings will be mixed with additives until COGCC thresholds are met, treated material will be incorporated into reclamation fill material.

Extraction Windsor Land Application COGCC Facility 433752 will be used for offsite disposal.

Beneficial reuse or land application plan submitted? Yes

Reuse Facility ID: 433752 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	26	16+1/4	42	0	80	100	80	0
SURF	13+1/2	9+5/8	36	0	1600	700	1600	0
1ST	8+3/4	7	26	0	9393	850	9393	0
1ST LINER	6+1/8	4+1/2	13.5	9293	18930			

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 Nearest permitted or existing wellbore penetrating objective formation is Resolution 12-64-35-2CH API #05-123-40766.
The Surface Mineral Lease is T12N, R64W: Section 22 - NW4 which is not being produced by this wellbore thus the right to construct is Surface Use Agreement.

This application is in a Comprehensive Drilling Plan _____ 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: Jeff Annable

Title: Regulatory Technician Date: 6/2/2015 Email: regulatory@petro-fs.com

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: _____

Expiration Date: _____

API NUMBER

05

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>
Rejected	These APDs are being rejected per the COGCC rejection policy that states a pad of Form 2s that requires a total of 4 or more attachments to be added or replaced will be rejected. This APD will either require modifying the BHL which would require new Well Location Plat, Deviated Drilling Plan and Directional Data (15 attachments) or Waivers from mineral owners and an Exception Location Letter (10+ attachments). Consultation with COGCC staff and the operator have resulted in concurrence that this APD should be rejected.
Drilling/Completion Operations	1) Submit Form 42 electronically to COGCC 48 hours prior to MIRU. 2) Comply with Rule 317.j and provide cement coverage from end of 7" casing to a minimum of 200' above Niobrara. Verify coverage with cement bond log. 3) Comply with Rule 321. Run and submit Directional Survey from TD to base of surface casing. Ensure that the wellbore complies with setback requirements in commission orders or rules prior to producing the well.

Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
1	Planning	Multi-well Pads are located in a manner which allows for resource extraction while maintaining the highest distances possible from the offsetting residential areas and complies with the wishes of the surface owner. A meeting with the surface owner will determine the fencing plan.
2	Pre-Construction	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. Identification of plugged and abandoned wells will be identified pursuant to 319.a.(5)
3	Traffic control	Access Roads: The access road will be constructed to accommodate local emergency vehicles. This road will be maintained for access at all times. Traffic will be routed to minimize local interruption.
4	General Housekeeping	Visual Impacts: Equipment, regardless of construction date, which are observable from any public highway shall be painted with uniform, non-contrasting, non-reflective color tones (similar to the Munsell Soil Color Coding System), and with colors matched to, but slightly darker than, the surrounding landscape. Maintain appearance with garbage clean-up; a trash bin will be located on site to accumulate waste by the personnel drilling the wells. Site will have unused equipment, trash and junk removed immediately. Operator shall keep the Surface Use Area as well as any roads or other areas used by Operator safe and in good order, including control of noxious weeds litter and debris.
5	Material Handling and Spill Prevention	Leak Detention Plan: Pumper will visit the location daily and visually inspect all wellheads and fittings for leaks. Additionally, monthly documented SPCCP inspections are conducted pursuant to 40 CFR 112. Control of fire hazards: All material that is considered a fire hazard shall be a minimum of 25' from the wellhead. Electrical equipment shall comply with API IRP 500 and will comply with the current national electrical code. Operator shall comply with state and federal laws, rules and regulations governing the presence of any petroleum products, toxic or hazardous chemicals or wastes on the Subject lands.

6	Dust control	Operator shall employ practices for control of fugitive dust caused by their operations. Such practices shall include but are not limited to the use of speed restrictions, regular road maintenance, restriction of construction activity during high- wind days, and silica dust controls when handling sand used in hydraulic fracturing operations. Additional management practices such as road surfacing, wind breaks and barriers may be used.
7	Construction	Guy line anchors: All guy line anchors shall be brightly marked pursuant to Rule 604.c.(2)Q.
8	Emissions mitigation	Green Completions - Emission Control System: Test separators and associated flow lines and sand traps shall be installed to accommodate green completions techniques pursuant to COGCC Rules. In the anticipated absence of a viable gas sales line, the flowback gas shall be thermally oxidized in an emissions control device (ECD), which will be installed and kept in operable condition for at least the first 90-days of production pursuant to CDPHE rules. This ECD shall have an adequate capacity for 1.5 times the largest flowback within a 10 mile radius, will be flanged to route gas to other or permanent oxidizing equipment and shall be provided with the equipment needed to maintain combustions where non-combustible gases are present.
9	Odor mitigation	Equipment shall be operated in such a manner that odors and dust do not constitute a nuisance or hazard to public welfare. Oil and gas operations shall be in compliance with the Department of Public Health and Environment, Air Quality Control Commission, Regulation No. 2 Odor Emission, 5 C.C.R. 1001-4, Regulation No. 3 (5 C.C.R. 1001-5), and Regulation No. 7 Section XVII.B.1 (a-c) and Section XII.
10	Drilling/Completion Operations	A closed –loop system will be used for drilling operations. Blowout Prevention Equipment (“BOPE”): A double ram and annular preventer will be used during drilling. Stabbing valves shall be installed in the event of reverse circulation and shall be prior tested with low and high pressure fluid. Lighting: Site lighting shall be directed downward and inward and shielded so as to avoid glare on public roads. Once the drilling and completion rigs leave the site, there will be no permanently installed lighting on site. Bradenhead Monitoring: Operator acknowledges and will comply with COGCC Policy for Bradenhead Monitoring during Hydraulic Fracturing Treatments in the Greater Wattenberg Area dated May 29, 2012. One of the first wells drilled on the pad will be logged with openhole 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 clearly state “No open-hole logs were run” and shall clearly identify (by API#, well name & number) the well in which openhole logs were run.
11	Interim Reclamation	Operator shall be responsible for segregating the topsoil, backfilling, repacking, reseeding, and recontouring the surface of any disturbed area so as not to interfere with Owner’s operations and shall reclaim such area to be returned to pre-existing conditions as best as possible with control of all weeds.
12	Final Reclamation	Within 90 days subsequent to the time of plugging and abandonment of the entire site, superfluous debris and equipment shall be removed from the site. The Operator shall restore the surface of the Land affected by such terminated operations as near as possible to the previous state that existed prior to operations.

Total: 12 comment(s)

Applicable Policies and Notices to Operators

Notice Concerning Operating Requirements for Wildlife Protection.

Attachment Check List

Att Doc Num	Name
400837750	FORM 2 SUBMITTED
400837989	WELL LOCATION PLAT
400843587	DIRECTIONAL DATA
400843589	DEVIATED DRILLING PLAN
400847813	OffsetWellEvaluations Data
400847814	SURFACE AGRMT/SURETY

Total Attach: 6 Files

General Comments

User Group	Comment	Comment Date
Permit	Bottom hole location footage is not legal. Spacing order 421-46 specifies distance to unit boundary must comply with adjacent spacing orders. Contacted operator to revise BHL.	6/29/2015 12:27:38 PM
Engineer	Evaluated offset wells. Distance to nearest permitted or existing well penetrating objective formation >150'. No Oil based Mud.	6/23/2015 3:18:43 PM
Permit	Passed completeness.	3/8/2015 3:11:32 PM

Total: 3 comment(s)

