

APPLICATION FOR PERMIT TO:

Drill Deepen Re-enter Recomplete and Operate

Date Received:

TYPE OF WELL OIL GAS COALBED OTHER _____ Refiling

ZONE TYPE SINGLE ZONE MULTIPLE ZONES COMMINGLE ZONES Sidetrack

Well Name: Falken Well Number: 16N-9B-L

Name of Operator: SYNERGY RESOURCES CORPORATION COGCC Operator Number: 10311

Address: 1675 BROADWAY SUITE 2600

City: DENVER State: CO Zip: 80202

Contact Name: Erin Ekblad Phone: (720)616.4319 Fax: (720)616.4301

Email: eekblad@syrinfo.com

RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20090043

WELL LOCATION INFORMATION

QtrQtr: NESE Sec: 11 Twp: 6N Rng: 66W Meridian: 6

Latitude: 40.500427 Longitude: -104.735949

Footage at Surface: 1769 Feet FNL/FSL FSL 276 Feet FEL/FWL FEL

Field Name: WATTENBERG Field Number: 90750

Ground Elevation: 4810 County: WELD

GPS Data:
Date of Measurement: 04/03/2017 PDOP Reading: 2.1 Instrument Operator's Name: Rob Wilson

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

523 FSL 300 FWL 533 FSL 300 FEL

Sec: 12 Twp: 6N Rng: 66W Sec: 9 Twp: 6N Rng: 66W

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: Surface Use Agreement

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.)

Sec 11 T6N R66W S2 Metes & Bound: ALL THAT PART OF THE S/2 OF SEC 11, T6N, R66W DESCRIBED AS BEGINNING AT THE SOUTHEAST CORNER OF SAID SEC 11; THENCE IN A WESTERLY DIRECTION ALONG THE SOUTH SECTION LINE OF SAID SECTION, 2294 ft TO A BOUNDARY FENCE; THENCE NORTH 18 DEGREES 30' EAST, 696 ft ALONG SAID BOUNDARY FENCE TO A POINT ON THE EAST BANK OF THE DIVIDING IRRIGATION DITCH; THENCE ALONG THE EAST SIDE OF SAID DITCH ON THE FOLLOWING COURSES: NORTH 41 DEGREES 45' WEST, 110 ft; THENCE NORTH 37 DEGREES 10' WEST, 385 ft; THENCE NORTH 36 DEGREES 10' WEST, 154 ft; THENCE NORTH 38 DEGREES 55' WEST, 147 ft; THENCE NORTH 39 DEGREES 55' WEST, 300 ft; THENCE NORTH 39 DEGREES 20' WEST, 280 ft; THENCE NORTH 31 DEGREES 55' WEST, 473 ft; THENCE NORTH 26 DEGREES 05' WEST, 552 ft, MORE OR LESS, TO THE EAST AND WEST HALF SECTION LINE EAST OF DIVIDING IRRIGATION DITCH; THENCE IN AN EASTELRY DIRECTION ALONG THE SAID HALF SECTION LINE 3538 ft TO THE EAST QUARTER CORNER OF SAID SECTION; THENCE IN A SOUTHERLY DIRECTION ALONG THE EAST SECTION LINE OF SAID SECTION 2660 ft, MORE OR LESS, TO THE POINT OF BEGINNING. CONTAINING 168.00 ACRES, MORE OR LESS.

See attached Mineral Lease Map.

Total Acres in Described Lease: 168 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: 1853 Feet
Building Unit: 1875 Feet
High Occupancy Building Unit: 5280 Feet
Designated Outside Activity Area: 5280 Feet
Public Road: 264 Feet
Above Ground Utility: 246 Feet
Railroad: 5280 Feet
Property Line: 276 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: 61 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary 523 Feet (Enter 5280 for distance greater than 1 mile.)

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

SPACING & FORMATIONS COMMENTS

6N-66W, Sec 9: SESE, Sec 10: S2S2, Sec 11: S2S2, Sec 12: SWSW

OBJECTIVE FORMATIONS

Objective Formation(s)	Formation Code	Spacing Order Number(s)	Unit Acreage Assigned to Well	Unit Configuration (N/2, SE/4, etc.)
NIOBRARA	NBRR		402	GWA

DRILLING PROGRAM

Proposed Total Measured Depth: 18925 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: 86 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? Yes

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 318A

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:

Beneficial reuse or land application plan submitted? No

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
CONDUCTOR	24	16	+6	0	40	35	40	0
SURF	13+1/2	9+5/8	36	0	1790	543	1790	0
1ST	8+1/2	5+1/2	20	0	18925	2312	18925	0

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

The acreage was calculated using Title Opinions from our Attorneys. They take into account all official surveys that become public record which may add or, in some cases, reduce a quarter/quarter from the standard 40.00 acres.

In Drilling Tab, Distance proposed wellbore to another operator is 86 feet to BLACKGOLD #3 using Anti-Collision Report. In Spacing Tab, distance proposed wellbore to offset same formation is 61 feet to Montera 10-33 using Plan View Map Measurement.

Attached signed waiver with offset operator, PDC attached for offset well within 150 feet of our proposed well.

Synergy has obtained written permission from the surface owner by way of Surface Use Agreement (SUA). The Surface Use Agreement has waivers for Rule 318A.a & 318A.c. See page 5, Section 9 (a).

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 No

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

Signed: _____ Print Name: Erin Ekblad

Title: Manager Regulatory Affair Date: _____ Email: eekblad@syrginfo.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.

COA Type

Description

<u>COA Type</u>	<u>Description</u>

Best Management Practices

No	BMP/COA Type	Description
1	Planning	604.c.(2)J.i 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.
2	Planning	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	Emissions mitigation	604.c.(2)C.i. Green Completions - Emission Control System: Test separators and associated flow lines and sand traps shall be installed on-site to accommodate green completions techniques pursuant to COGCC Rules. The flowback gas shall be sold or shall be captured and combusted with an Emissions Control Device (ECD), which will be installed and kept in operable condition for 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, and will be piped to other or permanent equipment and shall be provided with the equipment needed to maintain combustions where non-combustible gases are present. There is a sales line available, Synergy plans to turns to sales as soon as possible.
4	Drilling/Completion Operations	Drilling/Completions Operations: 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.
5	Drilling/Completion Operations	Drilling/Completion Operations: 604.c.(2)L. Closed chamber drill stem tests shall be allowed. All other drill stem tests shall require approval by the Director. None planned for this well.
6	Drilling/Completion Operations	Drilling/Completion Operations; 604.c.(2).O. Drilling and Completion-All loadlines shall be bullplugged or capped.
7	Drilling/Completion Operations	Drilling/Completion Operations: 604.c.(2)B.i Operator will be utilizing a closed loop system.
8	Drilling/Completion Operations	Operator will comply with COGCC policy for Bradenhead Monitoring During Hydraulic Fracturing Treatments in the Greater Wattenberg area dated May 29, 2012.
9	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.
10	Drilling/Completion Operations	One of the first wells drilled on the pad will be logged with Cased hole Pulsed Neutron Log with Gamma Ray Log from the kick-off point to 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 in that well and have those logs attached. The Form 5 for each well shall clearly state “No open-hole logs were run” and shall reference the Rule 317.p Exception granted for the well.

Total: 10 comment(s)

Attachment Check List

Att Doc Num	Name
401272052	WELL LOCATION PLAT
401277516	SURFACE AGRMT/SURETY
401286461	OffsetWellEvaluations Data
401286517	OFFSET WELL EVALUATION
401286520	DEVIATED DRILLING PLAN
401286525	OTHER
401286530	DIRECTIONAL DATA
401290341	MINERAL LEASE MAP
401295242	PROPOSED SPACING UNIT
401296522	OPEN HOLE LOGGING EXCEPTION
401296523	EXCEPTION LOC REQUEST
401297651	WAIVERS

Total Attach: 12 Files

General Comments

User Group	Comment	Comment Date
		Stamp Upon Approval

Total: 0 comment(s)

Public Comments

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

