

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



Document Number:

401165004

(SUBMITTED)

Date Received:

APPLICATION FOR PERMIT TO:

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

TYPE OF WELL OIL ☒ GAS ☐ COALBED ☐ OTHER _____

Refilling ☐

ZONE TYPE SINGLE ZONE ☒ MULTIPLE ZONES ☐ COMMINGLE ZONES ☐

Sidetrack ☐

Well Name: Hood

Well Number: 23N-22C-M

Name of Operator: SYNERGY RESOURCES CORPORATION

COGCC Operator Number: 10311

Address: 1625 BROADWAY SUITE 300

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: SESE Sec: 20 Twp: 6N Rng: 66W Meridian: 6

Latitude: 40.468191

Longitude: -104.796422

Footage at Surface: 665 Feet FNL/FSL FSL 1122 Feet FEL/FWL FEL

Field Name: WATTENBERG

Field Number: 90750

Ground Elevation: 4736.2

County: WELD

GPS Data:

Date of Measurement: 07/07/2016 PDOP Reading: 1.3 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 FSL 1442 FSL 75 FSL 1397 FSL 2609 FSL 75
FEL/FWL FEL 1442 FEL 75 FEL 1397 FEL 2609 FEL 75
Sec: 21 Twp: 6N Rng: 66W Sec: 22 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: 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.)

E/2NE/4, E/2SE/4 Sec.20, T 6 N, R 66 W

See attached mineral lease map.

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: 160 Feet

CULTURAL DISTANCE INFORMATION

Distance to nearest:

Building: 991 Feet
Building Unit: 991 Feet
High Occupancy Building Unit: 5280 Feet
Designated Outside Activity Area: 5280 Feet
Public Road: 655 Feet
Above Ground Utility: 670 Feet
Railroad: 4578 Feet
Property Line: 207 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: 11/02/2016

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: 216 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary 1193 Feet (Enter 5280 for distance greater than 1 mile.)

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

SPACING & FORMATIONS COMMENTS

6N 66W 20: E2SE; 21: S/2; 22: SW, W2SE

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		640	GWA

DRILLING PROGRAM

Proposed Total Measured Depth: 14954 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: 81 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	65	0	40	35	40	0
SURF	13+1/2	9+5/8	36	0	1750	478	1750	0
1ST	8+1/2	5+1/2	20	0	14954	1883	14954	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

In the spacing tab, distance proposed wellbore to offset same formation is 216 feet from Synergy's proposed wellbore Hood 11C-22-M using plan view map measurement.

In the drilling tab, distance proposed wellbore to another operator 81 feet to Ward R-20-19HN using anti-collision report.

The Surface Use Agreement has waivers for Rule 318A.a & 318A.c. See page 5, Section 10 (a).

Attached offset letters stating Synergy will not stimulate within 150 feet of Bayswater permits.

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: 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

--	--

Best Management Practices

No	BMP/COA Type	Description
1	Planning	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	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	Requirement to log well. 317.p For all new drilling operations, the operator shall be required to run a minimum of a resistivity log with gamma-ray or other petrophysical log(s) approved by the Director that adequately describe the stratigraphy of the wellbore. A cement bond log shall be run on all production casing or, in the case of a production liner, the intermediate casing, when these casing strings are run. These logs and all other logs run shall be submitted with the Drilling Completion Report, Form 5. Open-hole logs or equivalent cased-hole logs shall be run at depths that adequately verify the setting depth of surface casing and any aquifer coverage. These requirements shall not apply to unlogged open-hole completion intervals.
9	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.
10	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.

Total: 10 comment(s)

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
401180667	WELL LOCATION PLAT
401180971	OffsetWellEvaluations Data
401180973	SURFACE AGRMT/SURETY
401180974	OFFSET WELL EVALUATION
401180975	EXCEPTION LOC REQUEST
401180976	DIRECTIONAL DATA
401180978	DEVIATED DRILLING PLAN
401180979	PROPOSED SPACING UNIT
401180980	MINERAL LEASE MAP
401180995	OTHER

Total Attach: 10 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.

