

FORM  
2A

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:

401286218

Date Received:

06/15/2017

Oil and Gas Location Assessment

New Location     Refile     Amend Existing Location    Location#: \_\_\_\_\_

This Oil and Gas Location Assessment is to be submitted to the COGCC for approval prior to any ground disturbance activity associated with oil and gas operations. Approval of this Oil and Gas Location Assessment will allow for the construction of the below specified Location; however, it does not supersede any land use rules applied by the local land use authority. Please see the COGCC website at <http://cogcc.state.co.us/> for all accompanying information pertinent this Oil and Gas Location Assessment.

Location ID:

**452525**

Expiration Date:

**10/08/2020**

This location assessment is included as part of a permit application.

CONSULTATION

- This location is included in a Comprehensive Drilling Plan. CDP # \_\_\_\_\_
- This location is in a sensitive wildlife habitat area.
- This location is in a wildlife restricted surface occupancy area.
- This location includes a Rule 306.d.(1)A.ii. variance request.

Operator

Operator Number: 100322  
 Name: NOBLE ENERGY INC  
 Address: 1625 BROADWAY STE 2200  
 City: DENVER    State: CO    Zip: 80202

Contact Information

Name: Justin Garrett  
 Phone: (303) 228 4449  
 Fax: ( )  
 email: Justin.Garrett@nblenergy.com

RECLAMATION FINANCIAL ASSURANCE

- Plugging and Abandonment Bond Surety ID: 20030009     Gas Facility Surety ID: \_\_\_\_\_
- Waste Management Surety ID: \_\_\_\_\_

LOCATION IDENTIFICATION

Name: Y34-16    Number: Multi  
 County: WELD  
 Quarter: SESE    Section: 34    Township: 2N    Range: 64W    Meridian: 6    Ground Elevation: 5042

Define a single point as a location reference for the facility location. When the location is to be used as a well site then the point shall be a well location.

Footage at surface: 300 feet FSL from North or South section line  
825 feet FEL from East or West section line

Latitude: 40.088460    Longitude: -104.530760

PDOP Reading: 1.0    Date of Measurement: 01/10/2017

Instrument Operator's Name: Trevor Daley

## RELATED REMOTE LOCATIONS

(Enter as many Related Locations as necessary. Enter the Form 2A document # only if there is no established COGCC Location ID#)

**This proposed Oil and Gas Location is:**

**LOCATION ID #**

**FORM 2A DOC #**

Production Facilities Location serves Well(s)

401286225

401286221

## FACILITIES

Indicate the number of each type of oil and gas facility planned on location

Wells	3	Oil Tanks*	4	Condensate Tanks*		Water Tanks*	4	Buried Produced Water Vaults*	2
Drilling Pits		Production Pits*		Special Purpose Pits		Multi-Well Pits*		Modular Large Volume Tanks	
Pump Jacks	3	Separators*	8	Injection Pumps*		Cavity Pumps*		Gas Compressors*	6
Gas or Diesel Motors*		Electric Motors		Electric Generators*	2	Fuel Tanks*		LACT Unit*	1
Dehydrator Units*		Vapor Recovery Unit*	3	VOC Combustor*	2	Flare*		Pigging Station*	

## OTHER FACILITIES\*

### Other Facility Type

### Number

Knockout	2
Maintenance Tank	1
Scrubber	14
Solar Skid	1
Water Pump Skid	1
Heat Exchanger	1
Oil Pump	1
Gas Lift Meter Building	1
Surge Drum	2
Meter Buildings	3
IA Skid	1

\*Those facilities indicated by an asterisk (\*) shall be used to determine the distance from the Production Facility to the nearest cultural feature on the Cultural Setbacks Tab.

Per Rule 303.b.(3)C, description of all oil, gas, and/or water pipelines:

Eight (8) 2-4" Steel Three Phase Flowlines, Three (3) 2-4" Steel Gas Lift Lines, One (1) 8-16" Steel Gas Gathering Line, One (1) 8-16" Steel Oil line, Two (2) 12" Temporary Poly Line for Fresh Water, One (1) 4-8" Steel Produced Water Line

## CONSTRUCTION

Date planned to commence construction: 10/01/2017 Size of disturbed area during construction in acres: 12.60

Estimated date that interim reclamation will begin: 04/01/2018 Size of location after interim reclamation in acres: 7.80

Estimated post-construction ground elevation: 5042

## DRILLING PROGRAM

Will a closed loop system be used for drilling fluids: Yes

Is H<sub>2</sub>S anticipated? No

Will salt sections be encountered during drilling: No

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

Will oil based drilling fluids be used? Yes

## DRILLING WASTE MANAGEMENT PROGRAM

Drilling Fluids Disposal: OFFSITE Drilling Fluids Disposal Method: Commercial Disposal

Cutting Disposal: OFFSITE Cuttings Disposal Method: Commercial Disposal

Other Disposal Description:

Drilling waste disposal information added to address non-oil based mud and fluids used in non-producing portion of wellbore.

Beneficial reuse or land application plan submitted? Yes

Reuse Facility ID: \_\_\_\_\_ or Document Number: 2614238

Centralized E&P Waste Management Facility ID, if applicable: \_\_\_\_\_

## SURFACE & MINERALS & RIGHT TO CONSTRUCT

Name: Robert A. Fritzler

Phone: \_\_\_\_\_

Address: P.O. Box 343

Fax: \_\_\_\_\_

Address: \_\_\_\_\_

Email: \_\_\_\_\_

City: Keenesburg State: CO Zip: 80643

Surface Owner:  Fee  State  Federal  Indian

Check all that apply. The Surface Owner:  is the mineral owner

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 from or produced to this Oil and Gas Location: Yes

The right to construct this Oil and Gas Location is granted by: oil and gas lease

Surface damage assurance if no agreement is in place: \_\_\_\_\_ Surface Surety ID: \_\_\_\_\_

Date of Rule 306 surface owner consultation 06/16/2014

## CURRENT AND FUTURE LAND USE

Current Land Use (Check all that apply):

Crop Land:  Irrigated  Dry land  Improved Pasture  Hay Meadow  CRP

Non-Crop Land:  Rangeland  Timber  Recreational  Other (describe): \_\_\_\_\_

Subdivided:  Industrial  Commercial  Residential

Future Land Use (Check all that apply):

Crop Land:  Irrigated  Dry land  Improved Pasture  Hay Meadow  CRP

Non-Crop Land:  Rangeland  Timber  Recreational  Other (describe): \_\_\_\_\_

Subdivided:  Industrial  Commercial  Residential

## CULTURAL DISTANCE INFORMATION

Provide the distance to the nearest cultural feature as measured from Wells or Production Facilities onsite.

	From WELL	From PRODUCTION FACILITY
Building:	741 Feet	932 Feet
Building Unit:	741 Feet	932 Feet
High Occupancy Building Unit:	5280 Feet	5280 Feet
Designated Outside Activity Area:	5280 Feet	5280 Feet
Public Road:	289 Feet	500 Feet
Above Ground Utility:	1577 Feet	1723 Feet
Railroad:	4884 Feet	4089 Feet
Property Line:	300 Feet	125 Feet

### INSTRUCTIONS:

- All measurements shall be provided from center of nearest Well or edge of nearest Production Facility to nearest of each cultural feature as described in Rule 303.b.(3)A.  
- 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.  
- For measurement purposes only, Production Facilities should only include those items with an asterisk(\*) on the Facilities Tab.

## 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.  
- Large UMA Facility - 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: 03/28/2017

## FOR MULTI-WELL PADS AND PRODUCTION FACILITIES WITHIN DESIGNATED SETBACK LOCATIONS ONLY:

Check this box if this Oil and Gas Location has or will have Production Facilities that serve multiple wells (on or offsite) and the Production Facilities are proposed to be located less than 1,000 feet from a Building Unit. *(Pursuant to Rule 604.c.(2)E.i., the operator must evaluate alternative locations for the Production Facilities that are farther from the Building Unit, and determine whether those alternative locations were technically feasible and economically practicable for the same proposed development.)*

By checking this box, I certify that no alternative placements for the Production Facilities, farther from the nearest Building Unit, were available based on the analysis conducted pursuant to Rule 604.c.(2)E.i.

In the space below, explain rationale for siting the multi-well Production Facility(ies) that supports your Rule 604.c.(2)E.i determination. Attach documentation that supports your determination to this Form 2A.

Please see attached.

## SOIL

List all soil map units that occur within the proposed location. attach the National Resource Conservation Service (NRCS) report showing the "Map Unit Description" report listing the soil typical vertical profile. This data is to be used when segregating topsoil.

The required information can be obtained from the NRCS web site at <http://soildatamart.nrcs.usda.org/> or from the COGCC web site GIS Online map page found at <http://colorado.gov/cogcc>. Instructions are provided within the COGCC web site help section.

NRCS Map Unit Name: 15: Colby Loam, 1 to 3 percent slopes

NRCS Map Unit Name: 17: Colby Loam, 5 to 9 percent slopes

NRCS Map Unit Name: 79: Weld Loam, 1 to 3 percent slopes

**PLANT COMMUNITY:**

Complete this section only if any portion of the disturbed area of the location's current land use is on non-crop land.

Are noxious weeds present: Yes  No

Plant species from:  NRCS or,  field observation Date of observation: \_\_\_\_\_

List individual species:

Check all plant communities that exist in the disturbed area.

- Disturbed Grassland (Cactus, Yucca, Cheatgrass, Rye)
- Native Grassland (Bluestem, Grama, Wheatgrass, Buffalograss, Fescue, Oatgrass, Brome)
- Shrub Land (Mahogany, Oak, Sage, Serviceberry, Chokecherry)
- Plains Riparian (Cottonwood, Willow, Aspen, Maple, Poplar, Russian Olive, Tamarisk)
- Mountain Riparian (Cottonwood, Willow, Blue Spruce)
- Forest Land (Spruce, Fir, Ponderosa Pine, Lodgepole Pine, Juniper, Pinyon, Aspen)
- Wetlands Aquatic (Bullrush, Sedge, Cattail, Arrowhead)
- Alpine (above timberline)
- Other (describe): \_\_\_\_\_

**WATER RESOURCES**

Is this a sensitive area:  No  Yes

Distance to nearest

downgradient surface water feature: 61 Feet

water well: 230 Feet

Estimated depth to ground water at Oil and Gas Location 210 Feet

Basis for depth to groundwater and sensitive area determination:

Is the location in a riparian area:  No  Yes

Was an Army Corps of Engineers Section 404 permit filed  No  Yes If yes attach permit.

Is the location within a Rule 317B Surface Water Supply Area buffer No zone:

If the location is within a Rule 317B Surface Water Supply Area buffer have all public water supply systems within 15 miles been notified: \_\_\_\_\_

Is the Location within a Floodplain?  No  Yes Floodplain Data Sources Reviewed (check all that apply)

Federal (FEMA)

State

County

Local

Other

**GROUNDWATER BASELINE SAMPLING AND MONITORING AND WATER WELL SAMPLING**

Water well sampling required per Rule 318A

**WILDLIFE**

This location is included in a Wildlife Mitigation Plan

This location was subject to a pre-consultation meeting with CPW held on \_\_\_\_\_

**DESIGNATED SETBACK LOCATION EXCEPTIONS**

Check all that apply:

- Rule 604.a.(1)A. Exception Zone (within 500' of a Building Unit) and is in an Urban Mitigation Area
- 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)

**RULE 502.b VARIANCE REQUEST**

Rule 502.b. Variance Request from COGCC Rule or Spacing Order Number \_\_\_\_\_

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

Location is the 3-well Y34-16 Multi (Doc #401286218), consisting of the proposed Shufly State Y34-714 (Doc #401286215), Shufly State Y34-724 (Doc #401286216), & Shufly State Y34-734 – Ref. Well (Doc #401286217), with the production facilities within the disturbance.

- 8 Wells will produced at this facility
  - o Shufly State Y34-784
  - o Shufly State Y34-774
  - o Shufly State Y34-764
  - o Shufly State Y34-754
  - o Shufly State Y34-744
  - o Shufly State Y34-734
  - o Shufly State Y34-724
  - o Shufly State Y34-714

• Traffic Plan: All heavy traffic will access locations through the City of Hudson. From I-76 & Hwy 52, proceed East approximately 5.3 miles to CR 55. (Road is paved) Thence North on CR 55 approximately 1 mile. (Road is gravel) Thence East on CR 14 approximately 8/10 mile, North into Y34-16 Location. (Road is gravel)

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

Signed: \_\_\_\_\_ Date: 06/15/2017 Email: RegulatoryNotification@nblenergy.com

Print Name: Justin Garrett Title: Regulatory Analyst

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: 10/9/2017

**Surface Owner Information**

Owner Name	Address	Phone	Fax	Email
Robert A. Fritzler	P.O. Box 343 Keenesburg, CO 80643			
Shirley F. Fritzler	P.O. Box 343 Keenesburg, CO 80643			

2 Surface Owner(s)

## Conditions Of Approval

All representations, stipulations and conditions of approval stated in this Form 2A for this location shall constitute representations, stipulations and conditions of approval for any and all subsequent operations on the location unless this Form 2A is modified by Sundry Notice, Form 4 or an Amended Form 2A.

### COA Type

### Description

	The Approved Form 2A permit will be posted at the location during construction, drilling, and completions operations.
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## Best Management Practices

### No BMP/COA Type

### Description

1	Planning	COGCC Rule 604.c.(2)I. BOPE testing for drilling operations. Planning: <ul style="list-style-type: none"> <li>• 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.</li> </ul>
2	Planning	COGCC Rule 604.c.(2)J. BOPE for well servicing operations. Planning: <ul style="list-style-type: none"> <li>• Adequate blowout prevention equipment shall be used on all well servicing operations.</li> <li>• Backup stabbing valves shall 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.</li> </ul>
3	Planning	COGCC Rule 604.c.(2)L. Drill stem tests. Planning: <ul style="list-style-type: none"> <li>• Closed chamber drill stem tests shall be allowed. All other drill stem tests shall require approval by the Director.</li> </ul>
4	Planning	COGCC Rule 604.c.(2)U. Identification of plugged and abandoned wells. Planning: <ul style="list-style-type: none"> <li>• The operator shall identify the location of the wellbore with a permanent monument as specified in Rule 319.a.(5). The operator shall also inscribe or imbed the well number and date of plugging upon the permanent monument.</li> </ul>
5	Planning	COGCC Rule 604.c.(2)V. Development from existing well pads. Planning: <ul style="list-style-type: none"> <li>• Where possible, operators shall provide for the development of multiple reservoirs by drilling on existing pads or by multiple completions or commingling in existing wellbores (see Rule 322). If any operator asserts it is not possible to comply with, or requests relief from, this requirement, the matter shall be set for hearing by the Commission and relief granted as appropriate.</li> </ul>
6	Planning	COGCC Rule 803 Lighting Planning: <ul style="list-style-type: none"> <li>• Lighting on location is considered temporary and will be used during recompletion activities. Permanent lighting will not be installed and utilized during normal production operations. Temporary lighting will be directed downward, inward, and shielded towards location to avoid glare on public roads and Building Units within 1,000 feet. Lighting will be turned off when practical, i.e., no operations being conducted.</li> </ul>

7	Traffic control	<p>COGCC Rule 604.c.(2)D. Traffic Plan. Noble has communicated with the local jurisdiction regarding traffic plans and established the routes using main thoroughfares as much as possible.</p> <p>Traffic Control:</p> <ul style="list-style-type: none"> <li>• Speed limits will be enforced. The traffic plan and route include mitigation of impacts from temporary operations by applying magnesium chloride as dust suppression within 1000' of occupied residences on Weld County Road 14 and Weld County Road 55 as necessary.</li> </ul>
8	General Housekeeping	<p>COGCC Rule 604.c.(2)P. Removal of surface trash.</p> <p>General Housekeeping:</p> <ul style="list-style-type: none"> <li>• All surface trash, debris, scrap or discarded material connected with the operations of the property shall be removed from the premises or disposed of in a legal manner.</li> </ul>
9	General Housekeeping	<p>COGCC Rule 604.c.(2)T. Well site cleared.</p> <p>General Housekeeping:</p> <ul style="list-style-type: none"> <li>• Within ninety (90) days after a well is plugged and abandoned, the well site shall be cleared of all non-essential equipment, trash, and debris. For good cause shown, an extension of time may be granted by the Director.</li> </ul>
10	General Housekeeping	<p>Housekeeping will consist of neat and orderly storage of materials and fluids. Wastes will be temporarily stored in sealed containers and regularly collected and disposed of at offsite, suitable facilities. If spills occur prompt cleanup is required to minimize any commingling of waste materials with stormwater runoff. Routine maintenance will be limited to fueling and lubrication of equipment. Drip pans will be used during routine fueling and maintenance to contain spills or leaks. Any waste product from maintenance will be containerized and transported offsite for disposal or recycling. There will be no major equipment overhauls conducted onsite. Equipment will be transported offsite for major overhauls. Cleanup of trash and discarded materials will be conducted at the end of each work day. Cleanup will consist of patrolling the roadway, access areas, and other work areas to pickup trash, scrap debris, other discarded materials, and any contaminated soil. These materials will be disposed of properly.</p>
11	Storm Water/Erosion Control	<p>Stormwater management plans (SWMP) are in place to address construction, drilling and operations associated with Oil &amp; Gas development throughout the state of Colorado in accordance with Colorado Department of Public Health and Environment (CDPHE) General Permit No. COR- 038637. BMP's will be constructed around the perimeter of the site prior to, or at the beginning of construction. BMP's used will vary according to the location, and will remain in place and maintained until the pad reaches final reclamation. Noble Energy uses the BMPs or combination of BMPs listed below to control erosion and storm water runoff from construction, drilling, completion and operation activities:</p> <p>Berm, Cattle Guard, Culvert, Detention Basin, Dewatering Operations, Discharge Trench, Ditch, Erosion Control Blanket, Filtrexx Sediment Control, Hydro-Mulch, Ripping, Rip-Rap, Sediment Trap, Seeding, Silt Fence, Soil Roughening, or Tracking Pad</p>
12	Material Handling and Spill Prevention	<p>COGCC Rule 604.c.(2)F. Leak Detection Plan.</p> <p>Material Handling and Spill Prevention:</p> <ul style="list-style-type: none"> <li>• Noble Energy Inc. designs facilities to avoid releases and to be compliant with all regulations specific to leak detection and control (i.e. SPCC 40CFR112). Daily, monthly and annual inspections are performed at each facility to confirm operational integrity and regulatory compliance. Noble will perform maintenance if it is deemed necessary through any of the scheduled inspections. Automation technology is utilized to monitor any variations in pressures and fluid gauges which could indicate a leak.</li> </ul>
13	Material Handling and Spill Prevention	<p>COGCC Rule 604.c.(2)K. Pit level indicators.</p> <p>Material Handling and Spill Prevention:</p> <ul style="list-style-type: none"> <li>• Due to using a closed loop system pits will not be used.</li> </ul>

14	Material Handling and Spill Prevention	<p>COGCC Rule 604.c.(2)N. Control of fire hazards.</p> <p>Material Handling and Spill Prevention:</p> <ul style="list-style-type: none"> <li>Any material not in use that might constitute a fire hazard shall be removed a minimum of twenty-five (25) feet from the wellhead, tanks and separator. Any electrical equipment installations inside the bermed area shall comply with API RP 500 classifications and comply with the current national electrical code as adopted by the State of Colorado.</li> </ul>
15	Material Handling and Spill Prevention	<p>Spill Prevention Control and Countermeasures (SPCC) plans are in place to address any possible spill associated with Oil &amp; Gas operations throughout the state of Colorado in accordance with CFR 112.</p>
16	Construction	<p>COGCC Rule 604.c.(2)G. Berm construction.</p> <p>Construction:</p> <ul style="list-style-type: none"> <li>Lined, steel ring secondary containment will be constructed and shall enclose an area sufficient to contain and provide secondary containment for one-hundred fifty percent (150%) of the largest single tank. All containment devices shall be inspected at regular intervals and maintained in good condition. No potential ignition sources shall be installed inside the secondary containment area unless the containment area encloses a fired vessel. Refer to American Petroleum Institute Recommended Practices, API RP - D16.</li> <li>SWMP and SPCC plans will be in place to address and minimize potential impacts to nearby water conveyances and sensitive areas and direct stormwater from adjacent areas around the well pad and production facility.</li> </ul>
17	Construction	<p>COGCC Rule 604.c.(2)M. Fencing requirements.</p> <p>Construction:</p> <ul style="list-style-type: none"> <li>Unless otherwise requested by the Surface Owner, well sites constructed within the Designated Setback location will be fenced to restrict access by unauthorized persons.</li> </ul>
18	Construction	<p>COGCC Rule 604.c.(2)R. Tank specifications.</p> <p>Construction:</p> <ul style="list-style-type: none"> <li>All newly installed or replaced crude oil and condensate storage tanks shall be designed, constructed, and maintained in accordance with National Fire Protection Association (NFPA) Code 30 (2008 version). The operator shall maintain written records verifying proper design, construction, and maintenance, and shall make these records available for inspection by the Director. Only the 2008 version of NFPA Code 30 applies to this rule. This rule does not include later amendments to, or editions of, the NFPA Code 30. NFPA Code 30 may be examined at any state publication depository library. Upon request, the Public Room Administrator at the office of the Commission, 1120 Lincoln Street, Suite 801, Denver, Colorado 80203, will provide information about the publisher and the citation to the material.</li> <li>The Y34-16 Production Facility will have maintenance tanks as produced gas, water, and oil will be piped directly to a Supernode Facility.</li> </ul>
19	Construction	<p>COGCC Rule 604.c.(2)S. Access roads.</p> <p>Construction:</p> <ul style="list-style-type: none"> <li>At the time of construction, all leasehold roads shall be constructed to accommodate local emergency vehicle access requirements, and shall be maintained in a reasonable condition. Noble Energy plans on building the access road off of WCR 14 for Drilling and Completion activities.</li> </ul>

20	Construction	<p>1. A contiguous spray liner will be installed and will underlay the entire tank battery. The location of a partially buried cement water vault will be excavated prior to liner install.</p> <p>2. A 60 bbl cement water vault will be utilized to collect excess produced water from oil tanks. Produced water in the vault will be removed as needed and disposed of in an approved UIC disposal well. The cement water vault is one piece with no seams designed to minimize potential for leaks. All piping associated with the use of the water vault will be aboveground and visually inspected on a regular basis.</p> <p>3. The partially buried cement water vault will be installed above the spray in liner.</p> <p>4. A sized steel secondary containment ring will be installed surrounding the entire tank battery. Sand and gravel bedding will be installed to protect the liner prior to placing equipment in the containment area.</p>
21	Noise mitigation	<p>COGCC Rule 604.c.(2)A. Noise. Noise Mitigation:</p> <ul style="list-style-type: none"> <li>• Temporary operations – Baseline surveys will be completed near the residences to the northwest and south. Engineered sound walls no less than 24' tall will be used on parts of the southern and western sides of the Y34-16 Well Pad to mitigate noise impacts to the residences. The use of equipment specific sound walls might be used around the rig generators depending on sound impacts during operations.</li> <li>• Permanent facility – Sound walls may be installed around compressors that will be located at the Y34-16 Production Facility. Meter buildings will be installed around the meter equipment. These sound walls and meter building will be utilized to block sound to the residence located near the facility.</li> </ul>
22	Noise mitigation	Permanent sound walls will be placed around sound-producing equipment
23	Emissions mitigation	<p>COGCC Rule 604.c.(2).C. Green Completions – Emission Control Systems. Emissions Mitigation:</p> <ul style="list-style-type: none"> <li>• Flow lines, separators, and sand traps capable of supporting green completions as described in Rule 805 shall be installed at any Oil and Gas Location at which commercial quantities of gas are reasonably expected to be produced based on existing adjacent wells within 1 mile.</li> <li>• Uncontrolled venting shall be prohibited in an Urban Mitigation Area.</li> <li>• Temporary flowback flaring and oxidizing equipment shall include the following: <ul style="list-style-type: none"> <li>o Adequately sized equipment to handle 1.5 times the largest flowback volume of gas experienced in a ten (10) mile radius;</li> <li>o Valves and porting available to divert gas to temporary equipment or to permanent flaring and oxidizing equipment; and</li> <li>o Auxiliary fuel with sufficient supply and heat to sustain combustion or oxidation of the gas mixture when the mixture includes non-combustible gases.</li> </ul> </li> </ul> <p>These wells will be tied directly into a sales line, so they will not need flaring at any time.</p>

24	Drilling/Completion Operations	<p>COGCC Rule 604.c.(2)B. Closed Loop Drilling Systems – Pit Restrictions.</p> <p>Drilling/Completion Operations:</p> <ul style="list-style-type: none"> <li>• Closed loop drilling systems are required within the Buffer Zone Setback.</li> <li>• Pits are not allowed on Oil and Gas Locations within the Buffer Zone Setback, except fresh water storage pits, reserve pits to drill surface casing, and emergency pits as defined in the 100-Series Rules.</li> <li>• Fresh water pits within the Exception Zone shall require prior approval of a Form 15 pit permit. In the Buffer Zone, fresh water pits shall be reported within 30-days of pit construction.</li> <li>• Fresh water storage pits within the Buffer Zone Setback shall be conspicuously posted with signage identifying the pit name, the operator's name and contact information, and stating that no fluids other than fresh water are permitted in the pit. Produced water, recycled E&amp;P waste, or flowback fluids are not allowed in fresh water storage pits.</li> <li>• Fresh water storage pits within the Buffer Zone Setback shall include emergency escape provisions for inadvertent human access.</li> </ul>
25	Drilling/Completion Operations	<p>COGCC Rule 604.c.(2)H. Blowout preventer equipment (“BOPE”).</p> <p>Drilling/Completion Operations:</p> <ul style="list-style-type: none"> <li>• Blowout prevention equipment for drilling operations in a Designated Setback Location shall consist of (at a minimum): <ul style="list-style-type: none"> <li>o Rig with Kelly. Double ram with blind ram and pipe ram; annular preventer or a rotating head.</li> <li>o Rig without Kelly. Double ram with blind ram and pipe ram.</li> </ul> </li> </ul> <p>Mineral Management certification or Director approved training for blowout prevention shall be required for at least one (1) person at the well site during drilling operations.</p>
26	Drilling/Completion Operations	<p>COGCC Rule 604.c.(2)O. Loadlines.</p> <p>Drilling/Completion Operations:</p> <ul style="list-style-type: none"> <li>• All loadlines will be bullplugged or capped.</li> </ul>
27	Drilling/Completion Operations	<p>COGCC Rule 604.c.(2)Q. Guy line anchors.</p> <p>Drilling/Completion Operations:</p> <ul style="list-style-type: none"> <li>• All guy line anchors left buried for future use shall be identified by a marker of bright color not less than four (4) feet in height and not greater than one (1) foot east of the guy line anchor.</li> </ul>

Total: 27 comment(s)

### Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
2316119	RULE 306.E. CERTIFICATION
401286218	FORM 2A SUBMITTED
401305664	ACCESS ROAD MAP
401305666	FACILITY LAYOUT DRAWING
401305669	HYDROLOGY MAP
401305670	LOCATION DRAWING
401305671	LOCATION PICTURES
401305672	MULTI-WELL PLAN
401305673	WASTE MANAGEMENT PLAN
401305675	NRCS MAP UNIT DESC
401305677	SURFACE AGRMT/SURETY
401305681	WASTE MANAGEMENT PLAN
401305686	SITING RATIONALE
401310085	PRE-APPLICATION NOTIFICATION CERTIFICATION

Total Attach: 14 Files

## General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
OGLA	Supervisor reviewed and based on the information provided by the Operator, COGCC has determined that this proposed Oil and Gas Location meets the requirements for conditional approval based on compliance with COGCC Rules, including, but not limited to; Rule 604 Series Setback and Mitigation Measures. The Operator has presented a siting rationale for the Production Facilities in the Buffer Zone and Best Management Practices that adequately address site specific environmental, health, safety and welfare concerns. Weld County comment on County requirements, no other public comments. OGLA review complete and task passed.	07/21/2017
OGLA	Operator provided additional sales line information which was added to the Emissions Control BMP. Sent to supervisor for final buffer review.	07/18/2017
OGLA	Spoke with Operator via phone, concurrence on changing distance to WCR 14 so wells 289 feet and production 500 feet. Operator will email verbiage on sales line and no flaring.	07/18/2017
OGLA	Operator provided 306.e. certification on 7/14/2017. Operator provided BMPs on 7/17/2017 for traffic plan and additional information on stormwater BMPs. Leave phone message to discuss sales line timing.	07/17/2017
OGLA	OGLA review: Need to check if CR 14 to the south is actually a public road for cultural setbacks. Depth to ground water is based on nearby wells which are all domestic in the Larmie-Fox Hills formation. Potential for a shallow perched zone often found approximately 15-20 feet below ground surface. Based on the topography, it is unlikely the Operator will encounter groundwater during construction of the pad. Operator provided secondary and tertiary containment where necessary around tanks and buried water vaults for BMPs. Check on sales line and more specifics for erosion control based on distance to surface water.	07/04/2017
Permit	Permitting Review Complete.	07/03/2017
LGD	This proposed oil and gas facility is located in the Agricultural Zoned District of unincorporated Weld County. A Weld Oil and Gas Location Assessment (WOGLA) is required prior to constructing any improvements related to oil and gas exploration and production and prior to the issuance of any building permits. The operator has noticed that they intend to apply for a WOGLA. A building permit is required for the production facilities (tank battery, separators, pump jacks, compressors, generators, etc.) from the Department of Planning Services. Access points from County roads require an Access Permit from the Department of Public Works, which includes any necessary traffic control plans and Improvement Agreements. The use of County right-of-way requires a permit from the Department of Public Works. Troy Swain, Weld Oil/Gas Liaison and LGD (970) 400-3579.	06/28/2017
Permit	Passed Completeness.	06/23/2017
OGLA	Passed Buffer Zone completeness review	06/23/2017
Permit	Referred to OGLA Supervisor for buffer zone review.	06/20/2017

Total: 10 comment(s)