

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:

400544706

Date Received:

04/14/2014

Oil and Gas Location Assessment

☐ New Location ☐ Refile ☒ Amend Existing Location Location#: 319448

Submit signed original form. 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:

319448

Expiration Date:

☒ 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: Susan Miller
Phone: (303) 228-4246
Fax: (303) 228-4286
email: smiller@nobleenergyinc.com

RECLAMATION FINANCIAL ASSURANCE

☒ Plugging and Abandonment Bond Surety ID: 20030009 ☐ Gas Facility Surety ID: _____
☐ Waste Management Surety ID: _____

LOCATION IDENTIFICATION

Name: FIVE RIVERS Number: K09-62-1HN MLTI
County: WELD
QuarterQuarter: SESE Section: 8 Township: 4N Range: 66W Meridian: 6 Ground Elevation: 4702
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: 1034 feet FSL from North or South section line
674 feet FEL from East or West section line
Latitude: 40.321790 Longitude: -104.794670
PDOP Reading: 1.6 Date of Measurement: 08/21/2013
Instrument Operator's Name: Brian Rottinghaus

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)

400557122

400556893

FACILITIES

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

Wells	6	Oil Tanks	32	Condensate Tanks		Water Tanks	11	Buried Produced Water Vaults	7
Drilling Pits		Production Pits		Special Purpose Pits		Multi-Well Pits		Temporary Large Volume Above Ground Tanks	
Pump Jacks	3	Separators	32	Injection Pumps		Cavity Pumps			
Gas or Diesel Motors		Electric Motors		Electric Generators		Fuel Tanks		Gas Compressors	9
Dehydrator Units		Vapor Recovery Unit	3	VOC Combustor	21	Flare		LACT Unit	
								Pigging Station	

OTHER FACILITIES

Other Facility Type

Number

Blowcase	6
Compressor Skid Vault	6
Compressor Suction Scrubbers	4
EFM	8
Flowline	16
Gas Compression Pipelines	13
Knock Out Drum	3
KO Tank	3
Maintenance Tank	1
Sand Separator	16

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

Sixteen 2" to 4" steel flowlines; thirteen 2" to 4" steel gas compression pipelines.

CONSTRUCTION

Date planned to commence construction: 07/01/2014

Size of disturbed area during construction in acres: 22.00

Estimated date that interim reclamation will begin: 12/01/2014

Size of location after interim reclamation in acres: 11.00

Estimated post-construction ground elevation: 4702

DRILLING PROGRAM

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

Is H₂S 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? No

DRILLING WASTE MANAGEMENT PROGRAM

Drilling Fluids Disposal: OFFSITE

Drilling Fluids Disposal Method: Recycle/reuse

Cutting Disposal: OFFSITE

Cuttings Disposal Method: Beneficial reuse

Other Disposal Description:

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: Five Rivers Cattle, LLC

Phone: _____

Address: 1770 Promontory Circle

Fax: _____

Address: _____

Email: _____

City: Greeley State: CO Zip: 80634

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: Surface Use Agreement

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

Date of Rule 306 surface owner consultation 12/30/2013

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

Distance to nearest:

Building: 2233 Feet
Building Unit: 2366 Feet
High Occupancy Building Unit: 5280 Feet
Designated Outside Activity Area: 5280 Feet
Public Road: 1024 Feet
Above Ground Utility: 305 Feet
Railroad: 4493 Feet
Property Line: 315 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.

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: _____

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: 72: Vona loamy sand, 0-3% slopes

NRCS Map Unit Name: 68: Ustic Torriorthents, 9-15% slopes

NRCS Map Unit Name: 3: Aquolls and Aquents, 0-3% 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: 12/30/2013

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: 2052 Feet

water well: 710 Feet

Estimated depth to ground water at Oil and Gas Location 25 Feet

Basis for depth to groundwater and sensitive area determination:

The edge of the proposed disturbance area is located approximately 2052' east of the South Platte River. The proposed location is situated within the South Platte River floodplain. The north edge of the proposed disturbance area is located approximately 10' south of the Union Ditch. COGIS map shows the nearest domestic water well, permit no. 4485, located within the disturbance area. Field survey indicates this water well does not exist. The nearest water well, permit no. 25140 (Domestic), is located 710' north of the edge of the proposed disturbance area. Given the proximity to the South Platte River and Union Ditch and shallow ground water the site is considered a sensitive area.

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: _____

GROUNDWATER BASELINE SAMPLING AND MONITORING AND WATER WELL SAMPLING

Water well sampling required per Rule 318A

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)

RULE 502.b VARIANCE REQUEST

☒ Rule 502.b. Variance Request from COGCC Rule or Spacing Order Number 605.a.(2)

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

This 3-well pad includes proposed: Five Rivers K09-62-1HN (REF), Five Rivers K09-63-1HN, Five Rivers K09-63HN and will amend existing Loc ID No. 319448. This amendment will not increase previously permitted surface disturbance. Production equipment will be added to this location to service the following 13 new wells: Five Rivers K09-62-1HN (REF), Five Rivers K09-63-1HN, Five Rivers K09-63HN, Five Rivers K09-67-1HN (REF), Five Rivers K09-66-1AHN, Five Rivers K09-66-1HN, Five Rivers K08-66-1HN, Five Rivers K08-67-1HN, Five Rivers K07-65HN (REF), Five Rivers K07-65-1BHN, Five Rivers K09-65-1HN, Five Rivers K07-65-1HN, Five Rivers K09-64-1HN. At the request of the Landowner, the proposed location was chosen to consolidate new equipment next to the existing equipment. Noble will not construct on any slopes greater than 10%. The ditch shown on the Proposed Scaled Facility Drawing, at 465' SW is an unused dirt ditch that will be filled in during construction. See attached General Arrangement Drawing for Flood Hazard Purposes only.

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

Signed: _____ Date: 04/14/2014 Email: Regulatorynotification@nobleenergyinc.com

Print Name: Susan Miller 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: _____

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

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Best Management Practices

No BMP/COA Type

Description

1	General Housekeeping	General 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 pick up trash, scrap debris, other discarded materials, and any contaminated soil. These materials will be disposed of properly.
2	Storm Water/Erosion Control	Stormwater management plans (SWMP) are in place to address construction, drilling and operations associated with Oil & Gas development throughout the state of Colorado in accordance with Colorado Department of Public Health and Environment (CDPHE) and 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 until the pad reaches final reclamation.
3	Storm Water/Erosion Control	FLOODPLAIN, PAD Technical BMP's: Stabilize vulnerable slopes of Pad with riprap, vegetation, or other erosion control methods. Vulnerable could include the steepest part or most expose part of the pad. Incorporate drainage and hydrologic considerations during design and site layout of new locations that includes analysis for low water crossings and what is parallel to flow. If pad is located at the edge of a floodplain, consider raising height of the pad to make it above the projected flood levels. Consolidate pads whenever possible. Minimize access roads in floodplains.
4	Storm Water/Erosion Control	FLOODPLAIN, WELLHEAD Technical BMP's: Install structural guards or barriers upstream of wellheads that would deflect flood debris (Examples include 4" pipe with cement, cattle guard style, 4" bollards). Orient and construct wellhead and flowline to reinforce against impact of flood water and debris. Install wellhead equipment so it fails in safe mode (i.e. the valve closes when deenergized).

5	Storm Water/Erosion Control	FLOODPLAIN, TANKS Technical BMP's: Tanks, including partial buried tanks, should be ground anchored with engineered anchors to address the force of the flood water. Install steel rim berms or equivalent around production tanks. Line tank batteries with synthetic or geosynthetic liner. Enhance tank connections to minimize susceptibility to movement. Examples include bolting, deeper thread patterns, flexible hoses, welded connections. Install structural guards or barriers at the upstream end of tank batteries to deflect flood debris. Orient berm and equipment to reduce force of flood water and debris. Tanks should be constructed on compacted structure fill to reduce sub-grade failure.
6	Storm Water/Erosion Control	FLOODPLAIN, EQUIPMENT and FLOWLINE Technical BMP's: Ensure equipment so it fails in safe mode (i.e. valves automatically closes if fails). Bury below ground production flowlines at least 4' deep. Minimize dimensional aspects of lines or equipment that are perpendicular to flow path. Install stronger flowline design to withstand potential external forces. Examples include more anchors, thicker flowlines, tiebacks, etc. Install automation at sites to allow for remote shut in of wells and equipment.
7	Storm Water/Erosion Control	Wellhead, Tank and Equipment Technical BMP's: Incorporate drainage and hydrologic considerations during design and site layout of new locations that includes analysis for low water crossings and what is parallel to flow. Tanks, including partial buried tanks, should be ground anchored with engineered anchors to address the force of the flood water. Install steel rim berms or equivalent around production tanks. Line tank batteries with synthetic or geosynthetic liner. Install structural guards or barriers at the upstream end of tank batteries to deflect flood debris. Orient berm and equipment to reduce force of flood water and debris. Install automation at sites to allow for remote shut in of wells and equipment.
8	Material Handling and Spill Prevention	Spill Prevention Control and Countermeasures (SPCC) plans are in place to address any possible spill associated with Oil & Gas operations throughout the state of Colorado in accordance with CFR 112.
9	Construction	<p>Water Vault BMP:</p> <ol style="list-style-type: none"> 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. 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. 3. The partially buried cement water vault will be installed above the spray in liner. 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.

Total: 9 comment(s)

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
400544706	FORM 2A SUBMITTED
400581353	ACCESS ROAD MAP
400581354	ACCESS ROAD MAP
400581359	HYDROLOGY MAP
400581362	LOCATION PICTURES
400581368	NRCS MAP UNIT DESC
400581374	REFERENCE AREA MAP
400581375	REFERENCE AREA PICTURES
400581455	WASTE MANAGEMENT PLAN
400583937	LOCATION DRAWING
400585051	VARIANCE REQUEST
400585924	FACILITY LAYOUT DRAWING
400587651	FACILITY LAYOUT DRAWING
400590360	MULTI-WELL PLAN
400591581	SURFACE AGRMT/SURETY

Total Attach: 15 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Returned to draft: 1) MWP needs two approved horizontals plotted. 2) SUA not signed by surface owner.	4/15/2014 9:34:42 AM

Total: 1 comment(s)