

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:

400806764

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Date Received:

04/09/2015

Oil and Gas Location Assessment

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

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:

**442437**

Expiration Date:

**07/09/2018**

☒ 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: 10439

Name: CARRIZO NIOBRARA LLC

Address: 500 DALLAS STREET #2300

City: HOUSTON State: TX Zip: 77002

Contact Information

Name: CYNTHIA PINEL

Phone: (713) 358-6210

Fax: ( )

email: CYNTHIA.PINEL@CRZO.NET

RECLAMATION FINANCIAL ASSURANCE

☒ Plugging and Abandonment Bond Surety ID: 20120105 ☐ Gas Facility Surety ID: \_\_\_\_\_

☐ Waste Management Surety ID: \_\_\_\_\_

LOCATION IDENTIFICATION

Name: SONIC STAR Number: 1-12-8-60 PAD

County: WELD

QuarterQuarter: SESE Section: 11 Township: 8N Range: 60W Meridian: 6 Ground Elevation: 4877

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: 180 feet FSL from North or South section line

195 feet FEL from East or West section line

Latitude: 40.670329 Longitude: -104.048989

PDOP Reading: 1.3 Date of Measurement: 08/29/2014

Instrument Operator's Name: RAYMUND COOK

## 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 #

## FACILITIES

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

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

## OTHER FACILITIES\*

Other Facility Type

Number

LEASE CHECK METER

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:

2 3/8" 8 round pipe. Approximately 800' used for flowlines (oil, water, gas) from the wellhead to the facilities. Pipeline from the facilities to the sales meter will remain unresolved until gas potential of the well(s) is/are determined.  
We use Sch 80 pipe that is welded together for all flowlines and generally has a capacity of .7 barrels of fluid per 100 feet with the average being 150 – 200' of flowline from the wellhead to the separators

## CONSTRUCTION

Date planned to commence construction: 08/01/2015 Size of disturbed area during construction in acres: 4.50  
Estimated date that interim reclamation will begin: 02/01/2016 Size of location after interim reclamation in acres: 2.00  
Estimated post-construction ground elevation: 4874

## 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? No

## 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:

Beneficial reuse or land application plan submitted?

Reuse Facility ID: or Document Number:

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

## SURFACE & MINERALS & RIGHT TO CONSTRUCT

Name: William W Schneider

Phone: 970-490-1660

Address: 1408 Willow Way

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

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

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

City: Windsor State: CO Zip: 80550

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: No

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 \_\_\_\_\_

## 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:	4318 Feet	4040 Feet
Building Unit:	5280 Feet	5280 Feet
High Occupancy Building Unit:	5280 Feet	5280 Feet
Designated Outside Activity Area:	5280 Feet	5280 Feet
Public Road:	843 Feet	616 Feet
Above Ground Utility:	5280 Feet	5280 Feet
Railroad:	5280 Feet	5280 Feet
Property Line:	180 Feet	10 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.

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: \_\_\_\_\_

## 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 (onll 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.

## 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: 41\_Nunn Clay Loam, 0 to 6 percent slopes

NRCS Map Unit Name: 75\_Wages Fine Sandy Loam, 0 to 6 percent slopes

NRCS Map Unit Name: \_\_\_\_\_

## 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: 08/01/2014

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: 757 Feet

water well: 2650 Feet

Estimated depth to ground water at Oil and Gas Location 13 Feet

Basis for depth to groundwater and sensitive area determination:

Water well Permit #14646-F

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 zone: No

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 609

## 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 \_\_\_\_\_

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

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

Signed: \_\_\_\_\_ Date: 04/09/2015 Email: CYNTHIA.PINEL@CRZO.NET

Print Name: CYNTHIA PINEL Title: Regulatory Comp. 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: 7/10/2015

### **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**

	Unnecessary or excessive flaring is prohibited. Operator shall direct all salable quality gas to a sales line as soon as practicable or be shut in and conserved per Rule 805.b.(3)B.v.
	Operator shall provide notice to COGCC 48 hours prior to commencing construction of this Oil and Gas Location via Form 42. Please note that this notice is now required under Rule 316C.c.

## **Best Management Practices**

<b>No</b>	<b>BMP/COA Type</b>	<b>Description</b>
1	Storm Water/Erosion Control	Operator has designed the well pad with insloping and a storm water control ditch to prevent storm water run-on/run-off and the release of fluids from the location. See attached Construction Layout Drawing
2	Material Handling and Spill Prevention	Operator will ensure 110 percent secondary containment for any volume of fluids contained at the well site during drilling and completion. Operator will implement best management practices to contain any unintentional release of fluids.
3	Construction	The location will be fenced.
4	Drilling/Completion Operations	Operator will implement interim reclamation measures immediately after construction of the location to stabilize cut and fill slopes, stabilize the topsoil and spoil stockpiles, establish desirable vegetation and control weeds on the location. Jet pump used at the initial start-up of the well then replaced with pump jack.

Total: 4 comment(s)

## **Attachment Check List**

<b>Att Doc Num</b>	<b>Name</b>
2477625	SURFACE USE AGREEMENT
2477626	CORRESPONDENCE
400806764	FORM 2A SUBMITTED
400822200	ACCESS ROAD MAP
400822201	HYDROLOGY MAP
400822202	CONST. LAYOUT DRAWINGS
400822203	LOCATION DRAWING
400822204	LOCATION PICTURES
400822205	REFERENCE AREA MAP
400822206	REFERENCE AREA PICTURES
400836215	NRCS MAP UNIT DESC
400836216	NRCS MAP UNIT DESC

Total Attach: 12 Files

## General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final Review Completed. No LGD or public comment received.	7/8/2015 10:57:45 AM
Permit	removed the 317.p BMP per the operator; it was not correct and not relevant to the 2A. Corrected BMP was added to the related form 2 APD.	6/11/2015 4:05:26 PM
Permit	Per the operator, changed the answer to the question "will the minerals beneath the surface location be developed" from Yes to No.  Waiting on related APD.	6/9/2015 11:47:04 AM
OGLA	No Public Comments. OGLA task passed.	5/27/2015 8:49:56 AM
OGLA	IN PROCESS - Operator has confirmed the number of separators, the size of the disturbed area during construction, provided a copy of the SUA, revised distance to nearest Building and Building Unit, revised distance to nearest Above Ground Utility, confirmed distance to nearest downgradient surface water feature, & revised distance to nearest water well and depth to groundwater.  The 10 foot distance from Production Facility to nearest Property Line is from the edge of the disturbed area where the production facilities will be placed. The nearest production facility to the property line is an ECD (VOC Combustor) as shown on the Construction Layout Drawing. OGLA review complete. Waiting on Public Comment period.	5/20/2015 10:25:09 AM
OGLA	ON HOLD - Operator to confirm the number of separators, the size of the disturbed area during construction, the right to construct and provide SUA if necessary, revise distance to nearest Building and Building Unit, revise distance to nearest Above Ground Utility, confirm distance to nearest downgradient surface water feature and revise Hydrology Map if necessary, & revise distance to nearest water well and depth to groundwater. Due by 6/14/15.	5/14/2015 2:16:55 PM
Permit	Passed Completeness	5/6/2015 10:11:15 AM
Permit	1.) NRCS Soil Survey incorrect. Rather than NRCS map 37/40 please attach NRCS map 41/75. 2.) H2S is checked "Yes" on the Form 2A, but not on the Form 2. Requested clarification from the operator. 3.) Please provide the post construction elevation. Return to draft.	4/24/2015 10:49:21 AM
Permit	NRCS Soil Survey incorrect. Return to draft.	4/14/2015 8:19:39 AM

Total: 9 comment(s)