

FORM
2A

Rev
08/19

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:

402156151

(SUBMITTED)

Date Received:

09/27/2019

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:

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: 26580

Name: BURLINGTON RESOURCES OIL & GAS LP

Address: 925 N ELDRIDGE PARKWAY

City: HOUSTON State: TX Zip: 77079

Contact Information

Name: LARRY SMITH

Phone: (832) 4862590

Fax: (918) 6628057

email: LARRY.R.SMITH@CONOCOPHILLIPS.COM

FINANCIAL ASSURANCE

- ☒ Plugging and Abandonment Bond Surety ID (Rule 706): 19920030 ☐ Gas Facility Surety ID (Rule 711): _____
- ☐ Waste Management Surety ID (Rule 704): _____

LOCATION IDENTIFICATION

Name: GRANDE 4-65 20-19

Number: 1AH

County: ARAPAHOE

Quarter: NWNW Section: 21 Township: 4S Range: 65W Meridian: 6 Ground Elevation: 5659

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: 846 feet FNL from North or South section line

757 feet FWL from East or West section line

Latitude: 39.694231 Longitude: -104.675724

PDOP Reading: 1.8 Date of Measurement: 08/24/2018

Instrument Operator's Name: CHAD MEIERS

LOCAL GOVERNMENT INFORMATION

County: ARAPAHOE

Municipality: AURORA

Per § 34-60-106 (1)(f)(I)(A), the following questions pertain to the "local government with jurisdiction to approve the siting of the proposed oil and gas location."

The local government with jurisdiction is: Municipality

Does the local government with jurisdiction regulate the siting of Oil and Gas Locations, with respect to this COGCC application? If the local government has waived its right to precede the COGCC in siting determination, indicate by selecting "NO" here and selecting "Waived" below.

☒ Yes ☐ No

If yes, in checking this box, I hereby certify that an application has been filed with the local government with jurisdiction to approve the siting of the proposed oil and gas location. ☒

The local government siting permit type is: OIL AND GAS WELL PERMIT

The local government siting permit was filed on: 08/23/2019

The disposition of the application filed with the local government is: In Process

Additional explanation of local process:

Approval pending implementation of BMPs described in the Aurora Operator's Agreement executed 6/5/19. Anticipate approval of this permit October 24, 2019.

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	<u>8</u>	Oil Tanks*	<u>5</u>	Condensate Tanks*	<u> </u>	Water Tanks*	<u>2</u>	Buried Produced Water Vaults*	<u> </u>
Drilling Pits	<u> </u>	Production Pits*	<u> </u>	Special Purpose Pits	<u> </u>	Multi-Well Pits*	<u> </u>	Modular Large Volume Tanks	<u> </u>
Pump Jacks	<u> </u>	Separators*	<u>4</u>	Injection Pumps*	<u>2</u>	Cavity Pumps*	<u> </u>	Gas Compressors*	<u>1</u>
Gas or Diesel Motors*	<u> </u>	Electric Motors	<u> </u>	Electric Generators*	<u>1</u>	Fuel Tanks*	<u>1</u>	LACT Unit*	<u>1</u>
Dehydrator Units*	<u> </u>	Vapor Recovery Unit*	<u>4</u>	VOC Combustor*	<u>1</u>	Flare*	<u> </u>	Pigging Station*	<u> </u>

OTHER FACILITIES*

Other Facility Type	Number
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Vapor Recovery Tower	<u>2</u>
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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:

From the wellheads, 3" carbon steel flowlines run to an inlet manifold which routes flow to either bulk or test 2 phase separators. High pressure gas from the bulk and test 2 phase separators is sent down the sales gas line to a third party. The liquid from the bulk and test 2 phase separators is carried to bulk and test 3 phase separators for further processing. Low pressure gas off the 3 phase bulk and test separators is sent to a vapor recovery unit to compress the low pressure gas so it can be sent down the high pressure sales line to a third party. Oil from the bulk and test 3 phase separators is transferred to a vapor recovery tower then to tankage for storage. Water from the bulk and test 3 phase separators is transferred to the water tanks for storage.

CONSTRUCTION

Date planned to commence construction: 02/10/2020 Size of disturbed area during construction in acres: 15.42
Estimated date that interim reclamation will begin: 01/15/2021 Size of location after interim reclamation in acres: 10.74
Estimated post-construction ground elevation: 5664

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? Yes

DRILLING WASTE MANAGEMENT PROGRAM

Drilling Fluids Disposal: OFFSITE Drilling Fluids Disposal Method: Recycle/reuse

Cutting Disposal: OFFSITE Cuttings Disposal Method: Commercial Disposal

Other Disposal Description:

Commercial Disposal facility for freshwater used to drill surface section. Oil Based Mud used for remainder of lateral drilled will be reused from pad to pad.

Beneficial reuse or land application plan submitted? No

Reuse Facility ID: _____ or Document Number: _____

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

SURFACE & MINERALS & RIGHT TO CONSTRUCT

Name: Alpert Corporation

Phone: 303-773-3400

Address: 3033 East 1st Avenue

Fax: 303-694-6445

Address: Suite 725

Email: _____

City: Denver State: CO Zip: 80206

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 _____

If this Form 2A is associated with Drilling and Spacing Unit applications, list docket number(s) below:

190600412

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

SUBMITTED

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:	2575 Feet	2205 Feet
Building Unit:	4897 Feet	4616 Feet
High Occupancy Building Unit:	5280 Feet	5280 Feet
Designated Outside Activity Area:	5280 Feet	5280 Feet
Public Road:	751 Feet	451 Feet
Above Ground Utility:	792 Feet	492 Feet
Railroad:	5280 Feet	5280 Feet
Property Line:	681 Feet	406 Feet
School Facility::	5280 Feet	5280 Feet
School Property Line:	5280 Feet	5280 Feet
Child Care Center:	5280 Feet	5280 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, Designated Outside Activity Area, School Facility, and Child Care Center – as defined in 100 Series Rules.
- For measurement purposes only, Production Facilities should only include those items with an asterisk(*) on the Facilities Tab.

SCHOOL SETBACK INFORMATION

Was Notice required under Rule 305.a.(4)? ☐ Yes ☒ No

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: _____

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.

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: BvC-Bresser-Truckton sandy loams- 3 to 5 percent slopes

NRCS Map Unit Name: TrE-Truckton loamy sand- 5 to 20 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: _____

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: 1683 Feet

water well: 1408 Feet

Estimated depth to ground water at Oil and Gas Location 32 Feet

Basis for depth to groundwater and sensitive area determination:

Livestock water well #35635. Depth based on stock well #48208 (DWR records)

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 609

WILDLIFE

☐ This location is included in a Wildlife Mitigation Plan

☐ This location was subject to a pre-consultation meeting with CPW held on _____

Operator Proposed Wildlife BMPs

No BMP

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 The location used for footages in the Location Identification portion is the Grande 4-65 20-19 1AH (Doc #402187646).

An open house was hosted in Aurora on August 6, 2019 to provide site specific information to all community members within a 1 mile radius of this well site.

"Other" attachment is the executed Operating Agreement and associated BMP's between ConocoPhillips and City of Aurora.

Overall striving for 360 degree traffic flow

- 151' Existing well to new well- buffer zone for drilling activity, traffic and fall radius of derrick
- 174' from well row to south edge of pad- rig sticks out 120ft from well center. Remaining space for traffic and general back-in parking
- 225' East/West- designed for trailers (offices at a minimum, living quarters too normally) to be on perimeter and outside the ~150' fall radius.

o Note- on drillers side- catwalk sticks out 93' so allowing minimum 60ft for tubulars handling, need ~150' anyways from well center to trailers

o Note- off driller side- pits, solids control equipment, etc sticks out >150ft, then need additional room for traffic flow and loading cuttings trucks

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

Signed: _____ Date: 09/27/2019 Email: LARRY.R.SMITH@CONOCOPHILLIPS.COM

Print Name: LARRY SMITH Title: REGULATORY COORDINATOR

Based on the information provided herein, this Oil and Gas Location Assessment complies with COGCC Rules, applicable orders, and SB 19-181 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	Material Handling and Spill Prevention	All facilities are capable of being remotely monitored and remotely shut down, which includes isolation at the well head. Engineered liner systems are used in secondary steel containment systems for tank batteries. Pollution control containers (spill boxes) are used on truck loading lines and are placed within the limits of the secondary containment system. Automatic shutdown level devices are installed on each tank with remote monitoring capabilities. Automatic shutdown level devices are installed on all pressure vessels and liquid knockouts. Automatic shutdown pressure devices are installed on flowlines from well heads to facilities with remote monitoring capabilities. Additionally, cathodic protection is used on buried steel lines to mitigate corrosion. Automatic shutdown pressure devices are installed on process vessels with remote monitoring capabilities.

2	Material Handling and Spill Prevention	<p>Liquid Level High Kills: These kills prevent liquids from exiting a given vessel via a gas stream. If liquids enter a gas stream then the potential to experience small spills increases due to improper equipment for the process medium in the pipe. For example, if level high kills were not in place, liquid could be sent to an atmospheric combustor intended solely for the use of burning excess, or waste, gas in upset situations.</p> <p>Liquid Level Low Kills: Liquid level low kills can be considered a more generic kill that gives indication of one of potentially numerous process upsets. The most likely culprit resulting in a LSL kill is a hung dump valve (minor process upset), however these kills can also capture leaks to atmosphere. If a significant leak occurs on location, predetermined vessel level setpoints will no longer be valid and the affected vessel will then shut-down on a liquid level low kill.</p> <p>Pressure High Kills: Pressure high kills are somewhat self-explanatory, however the main reason we incorporate high pressure kills is not necessarily to protect vessels. We have PSV's installed on every vessel that prevent the vessels from over-pressuring, but we prefer to never pop a PSV as this is both a process safety risk as well as an environmental incident. We set our Pressure High kills to shut-down the site at approximately 80% of max allowable working pressure of each vessel, which shuts down the site before PSVs relieve to the atmosphere.</p> <p>Pressure Low Kills: Very similar to the Liquid Level Low kills, the low pressure shut-down alarm is a fairly generic indication of a process upset. Pressure low site shut-downs typically prevent gas or vapor spills, however they can also catch and prevent liquid spills.</p> <p>2-Phase vessel: On our current 2-Phase vessels we incorporate the following kills: liquid level high, pressure high, and pressure low. Future 2-Phase vessels are planned to be outfitted with liquid level low switches as well.</p> <p>3-Phase vessel: Our current and future 3-Phase vessels (heater treater) will be outfitted with all (4) site ESD kills.</p> <p>Along with automated shut-downs we have preventative maintenance and best practices in place to prevent leaks from vessels. These include:</p> <ul style="list-style-type: none"> • Yearly shut-downs and visual inspections of each 2-phase and 3-phase vessel on site • Yearly NDT (Non-Destructive Testing) of each 2-Phase and 3-Phase vessel shell and head on site o Vessels that fail this test are removed from service • Conservative corrosion allowances • Internal coating to prevent corrosion • Semi-Annual PSV testing • Weekly environmental checks by operations personnel (weekly at a minimum, usually every 1-2 days per site) • NDT of all water piping to prevent leaks due to corrosion • NDT spot checking of various flowlines to monitor for thin walled piping due to erosion or corrosion • Yearly test of all devices that shut down the facility (including the 4 shut-down devices listed above) • The above best management practices are similar to those utilized by PSM facilities
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Total: 2 comment(s)

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
402173484	ACCESS ROAD MAP
402173503	HYDROLOGY MAP
402173504	LOCATION DRAWING
402173505	LOCATION PICTURES
402173507	MULTI-WELL PLAN
402173510	NRCS MAP UNIT DESC
402173573	NRCS MAP UNIT DESC
402184502	OTHER
402218437	CONST. LAYOUT DRAWINGS
402218870	SURFACE AGRMT/SURETY

Total Attach: 10 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
OGLA	Returned to Draft for: - attachment CONST. LAYOUT DRAWINGS is of incorrect location - attachment REFERENCE AREA MAP is of incorrect location - attachment SURFACE AGRMT/SURETY does not meet Form 2A Attachment Guidance	10/22/2019
OGLA	Returned to Draft for: - "Facilities" tab: need description of pipelines to be installed (diameter, material, etc.) - attachment CONST. LAYOUT DRAWINGS is missing cross-sectional diagrams - attachment REFERENCE AREA PICTURES are included, but the REFERENCE AREA MAP is missing	10/03/2019

Total: 2 comment(s)

Public Comments

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

