

FORM
2A

Rev
04/18

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:

401635162

Date Received:

06/13/2018

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:

456353

Expiration Date:

07/26/2021

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: 10456

Name: CAERUS PICEANCE LLC

Address: 1001 17TH STREET #1600

City: DENVER State: CO Zip: 80202

Contact Information

Name: Jason Eckman

Phone: (970) 285-2656

Fax: ()

email: jeckman@caerusoilandgas.com

FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID (Rule 706): 20130021

Gas Facility Surety ID (Rule 711): _____

Waste Management Surety ID (Rule 704): _____

LOCATION IDENTIFICATION

Name: G09 Frac Pad Number: _____

County: GARFIELD

Quarter: SWNW Section: 9 Township: 5S Range: 96W Meridian: 6 Ground Elevation: 7663

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: 1899 feet FNL from North or South section line

577 feet FWL from East or West section line

Latitude: 39.631600 Longitude: -108.181480

PDOP Reading: 1.2 Date of Measurement: 11/29/2017

Instrument Operator's Name: Bart Hunting

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 _____	Oil Tanks* _____	Condensate Tanks* _____	Water Tanks* _____ 35	Buried Produced Water Vaults* _____
Drilling Pits _____	Production Pits* _____	Special Purpose Pits _____	Multi-Well Pits* _____	Modular Large Volume Tanks _____
Pump Jacks _____	Separators* _____	Injection Pumps* _____	Cavity Pumps* _____ 2	Gas Compressors* _____
Gas or Diesel Motors* _____	Electric Motors _____	Electric Generators* _____	Fuel Tanks* _____	LACT Unit* _____
Dehydrator Units* _____	Vapor Recovery Unit* _____	VOC Combustor* _____	Flare* _____	Pigging Station* _____

OTHER FACILITIES*

Other Facility Type

Number

<u>Other Facility Type</u>	<u>Number</u>

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:

Water supply and delivery lines will have to be installed. At this time we are unsure of what will be installed, but water lines will be 8-inch to 12-inch steel. A Sundry Notice will be filed prior to water line construction.

CONSTRUCTION

Date planned to commence construction: 08/06/2018 Size of disturbed area during construction in acres: 2.65
Estimated date that interim reclamation will begin: 08/06/2019 Size of location after interim reclamation in acres: 0.00
Estimated post-construction ground elevation: 7663

DRILLING PROGRAM

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

Is H₂S anticipated? _____

Will salt sections be encountered during drilling: _____

Will salt based mud (>15,000 ppm Cl) be used? _____

Will oil based drilling fluids be used? _____

DRILLING WASTE MANAGEMENT PROGRAM

Drilling Fluids Disposal: _____ Drilling Fluids Disposal Method: _____

Cutting Disposal: _____ Cuttings Disposal Method: _____

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: Caerus Piceance LLC

Phone: 303-565-4600

Address: 1001 17th Street, Suite 1600

Fax: _____

Address: _____

Email: _____

City: Denver State: CO Zip: 80202

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 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:	_____ Feet	5280 Feet
Building Unit:	_____ Feet	5280 Feet
High Occupancy Building Unit:	_____ Feet	5280 Feet
Designated Outside Activity Area:	_____ Feet	5280 Feet
Public Road:	_____ Feet	5280 Feet
Above Ground Utility:	_____ Feet	5280 Feet
Railroad:	_____ Feet	5280 Feet
Property Line:	_____ Feet	4666 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

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: _____

- 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.

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 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: 55—Parachute-Irigul complex, 5 to 30 percent slopes _____

NRCS Map Unit Name: _____

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, Chokeycherry)
- 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: 252 Feet

water well: 9131 Feet

Estimated depth to ground water at Oil and Gas Location 120 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 609

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 This Form 2A is for a remote frac pad to support completion of wells on the G09 596 and K08 596 well pads. Once completion activities are finished the pad will be fully reclaimed and seeded.

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

Signed: _____ Date: 06/13/2018 Email: jeckman@caerusoilandgas.com

Print Name: Jason Eckman Title: Sr. 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: 7/27/2018

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
	<p>Planning: The following COAs will apply:</p> <p>COA 91 - In addition to the notifications required by COGCC listed in the Northwest Notification Policy (Notice of Intent to Construct a New Location and Notice of Intent to Commence Hydraulic Fracturing Operations) and Rule 316C. COGCC Form 42. FIELD OPERATIONS NOTICE (a. Notice of Intent to Conduct Hydraulic Fracturing Treatment and c. Notice of Construction or Major Change); operator shall notify the COGCC 48 hours prior to onsite and offsite pipeline testing (temporary surface lines used for water transfer and/or flowback operations) using the Form 42 (as described in Rule 316C.m. Notice of Completion of Form 2/2A Permit Conditions). The appropriate COGCC individuals will automatically be email notified.</p> <p>COA 93 - Operator shall provide four (4) color photographs of the reference area, taken during the growing season of vegetation and facing each cardinal direction, within twelve (12) months after approval of the Form 2A permit. Each photograph shall be identified by date taken, well or Oil and Gas Location name, and direction of view.</p> <p>COA 94 - The remote frac pad facility shall be in operation for no longer than three (3) years. The three year time clock will start from the date of first use based on submittal of the Form 42 providing that date.</p> <p>COA 95 - The approved Form 2A #401635162 for this location will be posted onsite during construction, temporary surface pipeline placement and operations, remote frac pad water storage and water transfer operations, and demobilization.</p>
	<p>Construction: The following COAs will apply:</p> <p>COA 44 - The access road will be constructed and maintained as to not allow sediment to migrate from the access road to nearby surface water or any drainages leading to surface water.</p> <p>COA 28 - Additional containment shall be required where temporary or permanent pumps and other necessary equipment are located on the frac pad site.</p> <p>COA 29 - Operator will use adequately sized containment devices for all chemicals and/or hazardous materials stored or used on location (if applicable).</p>
	<p>Completion Operations: The following COA will apply:</p> <p>COA 25 - No open top tanks can be used for water storage, water transfer, or initial flowback fluids containment. In accordance with COGCC rules, the tanks will be set on compacted earth to decrease the permeability of the soil.</p> <p>Spill / Release Response: The following COAs will apply:</p> <p>COA 73a - An emergency spill response program that includes employee training, safety and maintenance provisions and current contact information for COGCC personnel will be implemented during water storage and water transfer operations. In the event of a spill or release, the operator shall immediately implement the emergency response procedures in the above described emergency response program. All personnel working at the location during all water storage and water transfer operations will receive training on spill response and reporting.</p> <p>COA 73b - A spill response trailer will be available near the location during water storage and water transfer operations (the trailer needs to be able to reach the site within 2 hours after an incident).</p>
	<p>Emissions Mitigation: The following COA will apply:</p> <p>COA 26 - Potential odors associated with the water storage and water transfer operations (including any flowback operations) must be controlled/mitigated.</p>

Material Handling and Spill Prevention: The following COAs will apply to this Form 2A if any temporary surface (COAs 45, 47, 48, and 54) or buried permanent offsite pipelines (poly or steel, COA 45) are used during water storage and water transfer operations at this remote frac pad facility:

COA 45 - Operator shall pressure test pipelines (any temporary surface lines used for hydraulic stimulation and/or flowback operations) in accordance with Rule 1101.e.(1) prior to putting into initial service any temporary surface or permanent buried pipelines and following any reconfiguration of the pipeline network, and tested annually, unless agreed to by both parties that the flowlines can be managed under an approved COGCC variance.

COA 47 - Operator will utilize, to the extent practical, all existing pipeline infrastructure for the storage and transfer of water for use in the temporary remote frac pad facility operations at this location. If temporary surface pipelines are needed, operator will utilize, to the extent practical, all existing access and other public roads, and/or existing pipeline right-of-ways, when placing/routing the surface pipelines. This will reduce surface disturbance and fragmentation of wildlife habitat in the area.

COA 48 - Operator must implement best management practices to contain any unintentional release of fluids along all portions of the surface pipeline route where temporary pumps and other necessary equipment are located. When in operation, pump stations will be inspected regularly to ensure response to pressure changes or pump issues. The entire line will be monitored, where feasible, during pumping and flowback operations. The surface poly lines will be subject to daily inspection during use. Operator will endeavor to minimize surface disturbance during pipeline monitoring.

COA 54 - Operator must utilize appropriate secondary containment for any volume of fluids that may be released before pump shut down from the surface pipeline at all stream and intermittent stream crossings. For stream or intermittent stream crossings, operator will ensure appropriate containment that may include 1) installing over-sized pipe "sleeves" which extend the length of the crossing and beyond to a distance deemed adequate to capture and/or divert any possible release of fluids and prevent infusion into the stream water; 2) catchment basins sized and constructed to contain fluid; 3) valves at both ends of the crossing; and/or 4) other comparable containment measures determined by the operator.

Best Management Practices

No	BMP/COA Type	Description
1	Planning	Use or modify existing roads where possible. Maximize the use of directional drilling to minimize habitat loss/fragmentation. Maximize use of remote telemetry for well monitoring to minimize traffic.
2	General Housekeeping	Caerus will comply with Rule 609 Statewide Groundwater Baseline Sampling and Monitoring. Caerus will comply with Rule 603.f. statewide equipment, weeds, waste, and trash requirements.
3	Wildlife	September 2017 - Caerus Piceance LLC (Caerus) agreed to the Amended and Restated Wildlife Mitigation Plan (WMP) for Encana's proposed oil and gas operations on the North Parachute Ranch (NPR) property. Caerus received authorization from Colorado Parks and Wildlife (CPW) to transfer the EnCana Wildlife Mitigation Plan Agreement (WMPA) to Caerus' existing WMPA. Caerus is currently adhering to all aspects of both WMPAs through Caerus' current best management practices.
4	Storm Water/Erosion Control	Stormwater is addressed under a field-wide Stormwater Management Plan (CDPHE Certification #COR037689). Run-on protection and run-off controls will be installed prior to the beginning of construction activities, with consideration given to worker safety, wildlife, and site access.
5	Construction	Any stockpile(s) for topsoil and excess cut material will be located in work areas surrounded by the BMPs as shown on the Construction Layout Drawings. Stormwater BMPs will be installed per details in the Stormwater Management Plan (SWMP) and as shown on the Construction Layout Drawings. Disturbed area of site will be left in a surface roughened condition when feasible. BMPs will be protected, inspected and repaired as necessary. Dust mitigation practices will be utilized. Any new flowline installations will be performed in accordance with new flowline guidance provided by the COGCC concerning Rules 1101 and 1102. Berms or other containment devices shall be constructed to be sufficiently impervious (corrugated steel with synthetic liner) to adequately contain any spilled or released material around crude oil, condensate, and produced water storage tanks, while also ensuring the adequate prevention of significant adverse environmental impacts.
6	Final Reclamation	Re-contouring: The disturbed areas surrounding the well location, including the access road will be re-contoured to blend as nearly possible with the natural topography. Final grading of back-filled and cut slopes will be done to prevent erosion and encourage establishment of vegetation. Existing drainages will be re-established. Re-vegetation: The long term objective is to establish a self-perpetuating plant community that is compatible with and capable of supporting the identified land use. Noxious weeds will be treated in accordance with applicable COGCC rules.

Total: 6 comment(s)

Attachment Check List

Att Doc Num	Name
2108494	HYDROLOGY MAP
401635162	FORM 2A SUBMITTED
401672751	ACCESS ROAD MAP
401672761	CONST. LAYOUT DRAWINGS
401672762	LOCATION DRAWING
401672775	LOCATION PICTURES
401672776	REFERENCE AREA MAP
401672778	NRCS MAP UNIT DESC

Total Attach: 8 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Preliminary review complete.	07/04/2018
LGD	Pass KHW	07/02/2018
OGLA	<p>06/26/2018 - location does fall within 'Sensitive Wildlife Habitat' area, therefore a CPW Wildlife consult is required; passed by CPW with the following statement - "This location is within the North Parachute Ranch Wildlife Mitigation Plan (WMP). The operator has agreed to implement the best management practices contained within the approved plan to avoid, minimize, and mitigate potential impacts to wildlife as a result of the proposed action.";</p> <p>06/29/2018 - initiated / completed OGLA Form 2A review by Dave Kubeczko; placed the following COAs on the Form 2A - notification, reference area pictures, Form 2A posting, 3-year timeframe, fluid containment, spill/release BMPs, spill response, odor control, access road sediment and dust control, secondary containment for pumps and chemicals, and pipeline placement / inspection / testing; due to proximity of the well pad to downgradient surface water (stream located 252' to the north-northeast), COGCC has designated this location a "sensitive area";</p> <p>07/17/2018 - passed OGLA Form 2A review by Dave Kubeczko with notification, reference area pictures, Form 2A posting, 3-year timeframe, fluid containment, spill/release BMPs, spill response, odor control, access road sediment and dust control, secondary containment for pumps and chemicals, and pipeline placement / inspection / testing COAs.</p>	06/29/2018
DOW	<p>This location is within the North Parachute Ranch Wildlife Mitigation Plan (WMP). The operator has agreed to implement the best management practices contained within the approved plan to avoid, minimize, and mitigate potential impacts to wildlife as a result of the proposed action.</p> <p>Taylor Elm, June 26, 2018, 13:32</p>	06/26/2018
Permit	Passed Completeness.	06/26/2018

Total: 5 comment(s)