

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:

402165116

(SUBMITTED)

Date Received:

11/18/2019

Oil and Gas Location Assessment

☐ New Location ☐ Refile ☒ Amend Existing Location Location#: 450942

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:

**450942**

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: 10110  
Name: GREAT WESTERN OPERATING COMPANY LLC  
Address: 1001 17TH STREET #2000  
City: DENVER State: CO Zip: 80202

Contact Information

Name: Linsey Jones  
Phone: (720) 595-2218  
Fax: ( )  
email: ljones@gwogco.com

FINANCIAL ASSURANCE

- ☒ Plugging and Abandonment Bond Surety ID (Rule 706): 20160041 ☐ Gas Facility Surety ID (Rule 711): \_\_\_\_\_
- ☐ Waste Management Surety ID (Rule 704): \_\_\_\_\_

LOCATION IDENTIFICATION

Name: Prairie LE Pad Number: \_\_\_\_\_  
County: ADAMS  
Quarter: SWSW Section: 20 Township: 1S Range: 66W 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: 477 feet FSL from North or South section line  
1062 feet FWL from East or West section line

Latitude: 39.944640 Longitude: -104.805039

PDOP Reading: 1.4 Date of Measurement: 07/28/2019

Instrument Operator's Name: Jared Christopher

LOCAL GOVERNMENT INFORMATION

County: ADAMS Municipality: Brighton

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: County

Does the local government with jurisdiction regulate the siting of Oil and Gas Locations, with respect to this location? If the local government does regulate the siting, but has waived its right to precede the COGCC in siting determination, indicate by selecting "YES" here and selecting "Waived" for the disposition 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 Development Permit

The local government siting permit was filed on: 08/26/2019

The disposition of the application filed with the local government is: Approved

Additional explanation of local process:

Great Western has signed an MOU with the City of Brighton

## 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>44</u>	Oil Tanks*	<u>12</u>	Condensate Tanks*	<u>    </u>	Water Tanks*	<u>5</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>2</u>
Pump Jacks	<u>    </u>	Separators*	<u>25</u>	Injection Pumps*	<u>    </u>	Cavity Pumps*	<u>    </u>	Gas Compressors*	<u>8</u>
Gas or Diesel Motors*	<u>    </u>	Electric Motors	<u>    </u>	Electric Generators*	<u>    </u>	Fuel Tanks*	<u>    </u>	LACT Unit*	<u>4</u>
Dehydrator Units*	<u>    </u>	Vapor Recovery Unit*	<u>2</u>	VOC Combustor*	<u>9</u>	Flare*	<u>    </u>	Pigging Station*	<u>    </u>

## OTHER FACILITIES\*

Other Facility Type Number

Eco Vapor	2
Electrical Equipment Area	1
Gas Lift Buildings	4
Gas Sales Meter	2
Gas Scrubber	2
Inlet Separator Mainfold Skid	3

\*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:

44 flowlines 2" Steel  
10 Oil Lines 4" Steel  
3 Water Line 6" Poly  
2 Water Line 4" Poly  
10 Gas Line 6" Steel  
2 Gas Line 4" Steel

## CONSTRUCTION

Date planned to commence construction: 01/07/2021 Size of disturbed area during construction in acres: 18.42  
Estimated date that interim reclamation will begin: 01/11/2023 Size of location after interim reclamation in acres: 6.62  
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:

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: Brighton Lakes LLC

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

Address: 200 W. Hampden Avenue

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

Address: Suite 201

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

City: Englewood State: CO Zip: 80111

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 12/09/2016

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

190300213

## 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:	1260 Feet	1045 Feet
Building Unit:	1260 Feet	1045 Feet
High Occupancy Building Unit:	5280 Feet	5280 Feet
Designated Outside Activity Area:	5280 Feet	5280 Feet
Public Road:	463 Feet	104 Feet
Above Ground Utility:	436 Feet	100 Feet
Railroad:	5023 Feet	4772 Feet
Property Line:	476 Feet	117 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: AsB - Ascalon Sandy Loam, 1 to 3 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, 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: 29 Feet

water well: 14 Feet

Estimated depth to ground water at Oil and Gas Location 12 Feet

Basis for depth to groundwater and sensitive area determination:

Depth to Groundwater is based on DWR Permit #13526-R with a static water level of 12'  
Sec 17 1S R66W  
Location lies within a Reg 42 Aquifer 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: \_\_\_\_\_

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 \_\_\_\_\_

### 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

MLVT Statement

1. The manufacturer of the MLVT is Brewer Steel Company
2. The size of the MLVT is 60,000 BBLs
3. The anticipated time frame the MLVT's will be onsite will be at least 75 days.
4. A Facility Layout Drawing depicting the placement of the MLVT's has been attached.

The signed Brighton MOU is attached as 'other'.

Interim reclamation date:

Considering time to construct, drill, & complete all 44 wells, a conservative estimate is 2 years.

Facilities:

Temporary equipment is included in total number on facilities tab but will only be set if needed in future:

- 1 Temporary Water Tank
- 1 Temporary VOC Combuster
- 1 Temporary Separator

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

Signed: \_\_\_\_\_ Date: 11/18/2019 Email: regulatorypermitting@gwogco.com

Print Name: Linsey Jones Title: Regulatory Analyst

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

## Best Management Practices

### No BMP/COA Type

### Description

1	Planning	To mitigate long-range noise and visual impacts, Great Western will install vegetative landscaping around the perimeter of the Location for the lifetime of the wells
2	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, cleanup will be implemented within 24-48 hours, as appropriate, to minimize any commingling of waste materials with storm water 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 will consist of patrolling the roadways, 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.

3	Storm Water/Erosion Control	Storm water controls will be constructed around the perimeter of the site prior to construction. The controls will result in no migration of sediment beyond the location boundaries. Typically, Great Western utilizes a ditch and berm system of storm water control at its sites. BMP's used are determined just prior to construction by a third-party storm water contractor and may vary according to the location. Storm water controls will remain in place until the pad is stabilized or reaches final reclamation.
4	Material Handling and Spill Prevention	Operator shall line the production facilities, using steel berm construction with an engineered liner, shall program the Location with remote shut in capabilities, shall install leak detection and conduct and pressure testing of pipelines.
5	Material Handling and Spill Prevention	In accordance with COGCC Rule 1002.f.(2) A. & B., Great Western shall provide a designated storage area for dry bulk chemicals and miscellaneous fluids. The dry chemicals in the storage area shall be adequately protected to prevent contact with precipitation, shall be elevated above storm- or standing water, and shall provide sufficient containment for liquid chemical storage to prevent release of spilled fluids from impacting soil, surface water or groundwater and will prevent the co-mingling of spilled fluids or chemicals with other E&P Waste.
6	Dust control	Dust control measures will be implemented to prevent generation of visible dust. Control measures will be applied and may include surface stabilization, or dust control with appropriate chemical or water applications.
7	Noise mitigation	<p>During the drilling and completions phases, Great Western will construct sound/visual walls that will be placed along the edges of the pad. The sound/visual walls will prevent ground level lighting from the oil and gas operations from shining on nearby residences and roads.</p> <p>Light sources will be directed downwards, and away from occupied structures. Once the drilling and completion rigs leave the site, there will be no permanently installed lighting on site.</p>
8	Emissions mitigation	Great Western shall conduct monitoring during drilling and completions and shall perform inspections during production (AVO and LDAR) and maintain compliance with the permit and control provisions of the Colorado Air Quality Control Program, Title 25, Article 7, C.R.S.
9	Odor mitigation	Drilling rig and completion equipment engine exhaust shall be directed away from the occupied buildings located to the southwest of the Location to mitigate odor emissions from the Location. Sealed tanks with pressure relief valves and emissions control devices shall be utilized throughout the production phase of the Location.
10	Drilling/Completion Operations	Great Western certifies that the MLVTs on this location will be designed and implemented consistent with the COGCC Policy on the use of MLVTs in the state of Colorado.
11	Drilling/Completion Operations	<p>Oil-based drilling fluids (OBDF) will be separated from the cuttings at surface. At the end of its use on a particular well, the liquid oil-based mud will be reused for additional drilling operations or it will be returned to the vendor who originally supplied the mud. Transportation will occur on a daily basis as required to facilitate ongoing drilling operations.</p> <p>Oil-based drill cuttings (OBDC) will be separated from liquid mud onsite and the cuttings will be temporarily stored onsite in steel bins. Accumulated cuttings will be transported for permanent disposal to a licensed solid waste disposal facility. The actual solid waste disposal facility that will be used will depend on geographic proximity to the well being drilled. Transportation will occur on a daily basis as required to facilitate ongoing drilling operations.</p>

Total: 11 comment(s)

## Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
402186876	WASTE MANAGEMENT PLAN
402186878	ACCESS ROAD MAP
402186886	HYDROLOGY MAP
402186887	LOCATION PICTURES
402186891	MULTI-WELL PLAN
402186893	SURFACE AGRMT/SURETY
402186895	OTHER
402189589	NRCS MAP UNIT DESC
402267652	LOCATION DRAWING
402288316	FACILITY LAYOUT DRAWING

Total Attach: 10 Files

## General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
OGLA	This Form is being returned to Draft for the following reason from the previous submittal: 3. The Land Use tab indicates that the current and future land use is "Improved Pasture." The Location Pictures show the Location in a cornfield and COGCC aerial photograph review suggests that land use is "Irrigated" cropland.	01/23/2020
OGLA	This Form is being returned to Draft for the following reasons: 1. Per COGCC Facility Drawing guidance, the Facility Layout Drawing must depict all Oil & Gas Facilities (existing and proposed) that are in the Facilities section tab of the Form 2A. The number of oil tanks, produced water tanks, separators shown on the Facilities Layout Drawing are different than those listed in the Facilities Section of the Form 2A. Two pumps listed in the Form 2A are not shown on the drawing; and six gas compressors, two electrical boxes, and two gas scrubbers are shown but are not listed in the Facilities tab of the Form 2A. (Rule 303.f) 2. Per COGCC Location Drawing guidance, the Location Drawings are intended to provide the COGCC an illustration of field verified visible improvements within 500 feet of the edge of the proposed Oil and Gas Location. The figure shows a 500 ft buffer and improvements. The Location Drawing shows a MLVT Pad and two MLVTs as being present, while the Facilities Layout Drawing shows the MLVTs as having been removed. Also the equipment shown on the Location Drawing and the number of oil tanks, produced water tanks, separators, compressors, etc shown are different than what is listed in the Facilities tab of the Form 2A. The Facilities tab of the Form 2A indicates 2 MLVTs are present. The Form and attachments should be updated per Rule 303.b.(1).B, COGCC MLVT policy, and Location Drawing guidance. 3. The Land Use tab indicates that the current and future land use is "Improved Pasture." The Location Pictures show the Location in a cornfield and COGCC aerial photograph review suggests that land use is "Irrigated" cropland. 4. Comments under the Operator Comments and Submittal tab of the Form 2A provides comments about the MLVTs. If the MLVTs/TLVSTs are still onsite, these comments are appropriate; however, if the MLVTs/TLVSTs have been removed already, please update the comments.	12/23/2019
OGLA	This Form is being returned to Draft for the following reasons: 1.Per COGCC Facility Drawing guidance, MLVTs must be located on the facility drawing. 2.Per COGCC MLVT Policy, MLVTs must be located on the Location Drawing. 3.Per COGCC Construction Drawing guidance, areas recontoured during interim reclamation must be shown. Also, this drawing may not be required under the Construction Drawing guidance. 4.The total area disturbed in the construction information part of the Form does not match the total area disturbed on the Construction Drawing and the Facility Drawing. 5.The total un-reclaimed area disturbed in the construction information part of the Form does not match the total un-reclaimed area disturbed in the Facility Drawing. 6.The basis for groundwater and sensitive area determination does not match the data for the estimated depth to groundwater in the Form.	11/21/2019

Total: 3 comment(s)

**SUBMITTED**

## **Public Comments**

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

