

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:

401807421

Date Received:

12/27/2018

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:

463802

Expiration Date:

04/03/2022

☒ 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: 47120

Name: KERR MCGEE OIL & GAS ONSHORE LP

Address: P O BOX 173779

City: DENVER State: CO Zip: 80217-3779

Contact Information

Name: JOHN PIEKARA

Phone: (720) 929-3094

Fax: ()

email: JOHN.PIEKARA@ANADARKO.COM

FINANCIAL ASSURANCE

☒ Plugging and Abandonment Bond Surety ID (Rule 706): 20010124 ☐ Gas Facility Surety ID (Rule 711): _____

☐ Waste Management Surety ID (Rule 704): _____

LOCATION IDENTIFICATION

Name: BARCLAY FARMS Number: 37-28HZ PAD

County: WELD

QuarterQuarter: NENE Section: 28 Township: 3N Range: 66W Meridian: 6 Ground Elevation: 4945

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: 319 feet FNL from North or South section line

957 feet FEL from East or West section line

Latitude: 40.202398 Longitude: -104.776379

PDOP Reading: 1.3 Date of Measurement: 09/26/2018

Instrument Operator's Name: ROB WILSON

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> </u>	Condensate Tanks*	<u>1</u>	Water Tanks*	<u>3</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>8</u>	Separators*	<u>10</u>	Injection Pumps*	<u> </u>	Cavity Pumps*	<u> </u>	Gas Compressors*	<u> </u>
Gas or Diesel Motors*	<u> </u>	Electric Motors	<u> </u>	Electric Generators*	<u> </u>	Fuel Tanks*	<u> </u>	LACT Unit*	<u>1</u>
Dehydrator Units*	<u> </u>	Vapor Recovery Unit*	<u> </u>	VOC Combustor*	<u>1</u>	Flare*	<u> </u>	Pigging Station*	<u> </u>

OTHER FACILITIES*

Other Facility Type

Number

Temporary 500 bbl tanks	18
Temporary ECDs	3
Flow Lines	8
Gas Pipelines	2
Compressed air supply lines	8
Gas lift lines	8
Oil Pipeline	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:

Two 500 barrel skid-mounted frac tanks will be temporarily placed onsite for use of the pre-spud rig only. One tank will store water and the other will store water-based mud. A temporary ECD may be utilized during drilling.

Sixteen temporary 500 barrel tanks and two temporary ECDs will be utilized during flowback and initially for produced water. It is estimated the temporary tanks will be on location for 6 - 9 months, and will be removed incrementally as water production declines. The ECDs will be on location for the duration the temporary tanks are utilized.

Please see Comments section for flow line and pipeline description.

CONSTRUCTION

Date planned to commence construction: 04/07/2019 Size of disturbed area during construction in acres: 11.05

Estimated date that interim reclamation will begin: 09/01/2019 Size of location after interim reclamation in acres: 2.56

Estimated post-construction ground elevation: 4945

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: Commercial Disposal

Cutting Disposal: OFFSITE

Cuttings Disposal Method: Commercial Disposal

Other Disposal Description:

Please see comments section for disposal description.

Beneficial reuse or land application plan submitted? Yes

Reuse Facility ID: _____ or Document Number: _____

Centralized E&P Waste Management Facility ID, if applicable: 149021

SURFACE & MINERALS & RIGHT TO CONSTRUCT

Name: Barclay Farms LLC

Phone: _____

Address: 13017 WCR 30

Fax: _____

Address: _____

Email: _____

City: Platteville State: CO Zip: 80651

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 04/20/2018

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:	1698 Feet	1181 Feet
Building Unit:	1698 Feet	1189 Feet
High Occupancy Building Unit:	5280 Feet	5280 Feet
Designated Outside Activity Area:	5280 Feet	5280 Feet
Public Road:	310 Feet	120 Feet
Above Ground Utility:	349 Feet	159 Feet
Railroad:	5280 Feet	5280 Feet
Property Line:	319 Feet	109 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.
- 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: 47 - Olney fine 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: 11/29/2018

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: 5280 Feet

water well: 1333 Feet

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

Basis for depth to groundwater and sensitive area determination:

Nearest downgradient surface water feature >5280'

Spear Canal: 1323' W Elev: 4978'

Loc Elev: 4945'

Nearest water wells:

1333' NE, Permit 276894-, depth 300', Static Water Level 160', Elev 4920'

2877' E, Permit 106541-, depth 40', Static Water Level 7', Elev 4920'

Sensitive Area Determination: NOT A SENSITIVE AREA

Location is NOT in floodplain according to Weld County and FEMA

(SWL calc: $(4945 - 4920) + 7 = 32$)

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 _____

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	<p>Please ensure any email correspondence are directed to both the permitting Analyst and DJREGULATORY@ANADARKO.COM.</p> <p>Drilling fluids disposal: KMG will reuse water-based drilling fluids to the maximum extent possible, at which point they will either be land applied or taken to a licensed, commercial disposal site; the decision will be based upon laboratory analysis of fluids. KMG will reuse oil-based drilling fluids to the maximum extent possible, at which point they will be returned to the fluids manufacturer for reconditioning or disposal at a licensed, commercial disposal site.</p> <p>Cuttings disposal: Water-based cuttings will be disposed of using a Centralized E&P Waste Management facility or a private spread field, depending on what is feasible at the time of drilling. Oil-based cuttings will be disposed of offsite and at a licensed, commercial disposal site.</p> <p>Pipelines: Buried pipelines will be utilized to gather the gas and oil product from the location (3 gas pipelines, 1 oil pipeline). Both gas and oil pipelines will be constructed from steel of suitable wall thickness and material grade to meet the respective gathering systems design pressure. Gas pipelines will range in diameter from 4" to 20"; oil pipelines from 4" to 12". Capacity of pipelines will vary based on diameter. Pipelines will begin at the location and terminate at larger trunk lines in the area.</p> <p>Temporary above ground polyethylene water pipelines (diameter 10" – 12" with a 60 BPM capacity) will deliver water to location operations from larger trunk lines.</p> <p>8 flow lines will flow to the production facility location. During production, flow direction in the flow lines is from the well head to the production facility. The size of flow lines is typically 2". Flow lines will be constructed from steel pipe, buried, and will equal the distance between the well heads and the production facility, approximately 235'.</p> <p>8 compressed air supply lines will also be installed from the well head to the production facility. During operation flow direction in the supply lines will be from the production facility to the well head. The size of the supply lines is typically 1". Supply lines will be constructed from steel pipe, buried, and will equal the distance between the well heads and the production facility, approximately 235'.</p> <p>Gas lift lines are also occasionally installed (one per well) from the well head to the production facility. During operation flow direction in the gas lift lines will be from the production facility to the well head. The size of the gas lift lines is typically 2". Gas lift lines will be constructed from steel pipe, buried, and will equal the distance between the well heads and the tank battery, approximately 235'.</p> <p>CUSTODY TRANSFER: Gas custody transfer occurs at the custody transfer meter located on the proposed production facility location. Oil custody transfer occurs at the LACT Unit located on the proposed production facility location. Oil is transferred from the LACT Unit into a pipeline owned by Anadarko Wattenberg Oil Complex LLC.</p> <p>Individual species: Alkali sacaton – Sporobolus airoides, Canadian horsetweed - Conyza canadensis, common mullein – Verbascum Thapsus L. (NOXIOUS WEED-C-LIST), woolly plantain - Plantago patagonica, slender headed wheatgrass – Elymus trachycaulus, smooth brome - Bromus inermis, and witchgrass – Panicum capillare L.</p> <p>Plant communities: Shortgrass Prairie (alkali sacaton, Canadian horsetweed, common mullein, woolly plantain, slender headed wheatgrass, smooth brome, and witchgrass)</p>
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I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct and complete.

Signed: _____ Date: 12/27/2018 Email: DJREGULATORY@ANADARKO.COM

Print Name: JOHN PIEKARA 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: 4/4/2019

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

	The Approved Form 2A permit will be posted at the location during construction, drilling, and completions operations.
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Best Management Practices

No BMP/COA Type

Description

1	Planning	This proposed oil and gas location is located in a rural rangeland. The nearest building unit is located 1189' away.
2	Material Handling and Spill Prevention	Berm Construction: The temporary produced water storage tanks will be staged on a geosynthetic liner and surrounded by an earthen berm. The berms shall enclose an area sufficient to provide secondary containment for 150% of the volume of the largest single tank, and shall be sufficiently impervious to contain spilled or released material. Berms and the liner shall be inspected at regular intervals and maintained in good condition.
3	Material Handling and Spill Prevention	Berm Construction: A geosynthetic liner will be laid under the tanks on this location and a metal containment will be constructed. Berms or other secondary containment devices will be constructed around crude oil, condensate, and produced water storage tanks and shall enclose an area sufficient to contain and provide secondary containment for 150% of the largest single tank. Berms and other secondary containment devices shall be inspected at scheduled intervals and maintained in good condition.
4	Emissions mitigation	ECD(s) will be utilized to mitigate releases of emissions from temporary produced water storage tanks for the duration which the tanks are on location and being used.

Total: 4 comment(s)

Attachment Check List

Att Doc Num

Name

2316538	WASTE MANAGEMENT PLAN
401807421	FORM 2A SUBMITTED
401877087	ACCESS ROAD MAP
401877088	HYDROLOGY MAP
401877089	LOCATION DRAWING
401880189	REFERENCE AREA PICTURES
401880192	REFERENCE AREA MAP
401880193	WELL LOCATION PLAT
401880195	MULTI-WELL PLAN
401880198	LOCATION PICTURES
401880199	NRCS MAP UNIT DESC
401881526	SURFACE AGRMT/SURETY

Total Attach: 12 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Final Review	•With concurrence from the operator, corrected the date of construction. •Final permitting review complete. Sent to Final Approval.	03/29/2019
OGLA	Operator responded with new waste management plan - replaced, provided BMP for tanks, and concurrence for removing facility drawing. OGLA review complete and task passed.	03/27/2019
OGLA	OGLA review: Check with Operator on waste management plan most current, will permanent tanks also have containment. Edge of disturbance is greater than 1000 feet from a building unit, so a facility layout is not necessary and is the same as the location drawing – request concurrence to remove from 2A.	03/27/2019
Permit	•With concurrence from the operator, corrected the right to construct from “Surface Use Agreement” to “Oil and Gas Lease”.	03/19/2019
Permit	•With concurrence from the operator, added acknowledgement of the "Surface owner has signed the oil and gas lease".	03/15/2019
Permit	•Requesting concurrence on changing the right to construct to Lease. •Initial permitting review complete and task passed.	03/11/2019
Permit	Passed completeness.	12/31/2018

Total: 7 comment(s)