

FORM  
2A

Rev  
08/13

State of Colorado  
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203  
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:

401040031

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Date Received:

05/23/2016

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:

**446499**

Expiration Date:

**07/06/2019**

☒ 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: CHERYL LIGHT

Phone: (720) 929-6461

Fax: (720) -929-7461

email: CHERYL.LIGHT@ANADARKO.COM

RECLAMATION FINANCIAL ASSURANCE

☒ Plugging and Abandonment Bond Surety ID: 20010124 ☐ Gas Facility Surety ID: \_\_\_\_\_

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

LOCATION IDENTIFICATION

Name: CAMENISCH Number: 29C-35HZ

County: WELD

Quarter: SWSW Section: 2 Township: 1N Range: 67W Meridian: 6 Ground Elevation: 5034

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: 425 feet FSL from North or South section line

824 feet FWL from East or West section line

Latitude: 40.073945 Longitude: -104.864463

PDOP Reading: 1.2 Date of Measurement: 11/19/2015

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 #**

Production Facilities Location serves Well(s)

318184

## FACILITIES

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

|                       |   |                      |    |                      |   |                  |   |                               |   |
|-----------------------|---|----------------------|----|----------------------|---|------------------|---|-------------------------------|---|
| Wells                 | 7 | Oil Tanks*           |    | Condensate Tanks*    | 1 | Water Tanks*     | 2 | Buried Produced Water Vaults* |   |
| Drilling Pits         |   | Production Pits*     |    | Special Purpose Pits |   | Multi-Well Pits* |   | Modular Large Volume Tanks    |   |
| Pump Jacks            | 7 | Separators*          | 11 | Injection Pumps*     |   | Cavity Pumps*    |   | Gas Compressors*              |   |
| Gas or Diesel Motors* |   | Electric Motors      |    | Electric Generators* |   | Fuel Tanks*      |   | LACT Unit*                    | 1 |
| Dehydrator Units*     |   | Vapor Recovery Unit* | 3  | VOC Combustor*       | 1 | Flare*           |   | Pigging Station*              |   |

## OTHER FACILITIES\*

### Other Facility Type

### Number

|                                    |    |
|------------------------------------|----|
| TEMP 500 BBL TANKS W/OPTIONAL ECDS | 2  |
| FLOW LINES                         | 33 |
| OIL PIPELINE                       | 1  |
| GAS PIPELINES                      | 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:

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.

Please see Comments section. Description of pipelines and flow lines does not fit in space provided.

## CONSTRUCTION

Date planned to commence construction: 02/01/2017      Size of disturbed area during construction in acres: 10.00  
Estimated date that interim reclamation will begin: 06/30/2017      Size of location after interim reclamation in acres: 3.00  
Estimated post-construction ground elevation: 5034

## 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:

Please see Comments section. Disposal description will not fit in space provided.

Beneficial reuse or land application plan submitted? Yes

Reuse Facility ID: \_\_\_\_\_ or Document Number: 149021

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

## SURFACE & MINERALS & RIGHT TO CONSTRUCT

Name: PHILIP CAMENISCH

Phone: 303-772-0797

Address: P. O. BOX 561

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

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

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

City: JOHNSTOWN State: CO Zip: 80534

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 07/15/2015

## 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:      | <u>1646</u> Feet | <u>1621</u> Feet         |
| Building Unit: | <u>2032</u> Feet | <u>1988</u> 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.

|                                   |                  |                  |
|-----------------------------------|------------------|------------------|
| High Occupancy Building Unit:     | <u>5280</u> Feet | <u>5280</u> Feet |
| Designated Outside Activity Area: | <u>5280</u> Feet | <u>5280</u> Feet |
| Public Road:                      | <u>441</u> Feet  | <u>54</u> Feet   |
| Above Ground Utility:             | <u>361</u> Feet  | <u>72</u> Feet   |
| Railroad:                         | <u>5280</u> Feet | <u>5280</u> Feet |
| Property Line:                    | <u>424</u> Feet  | <u>40</u> Feet   |

- 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: 59 - SHINGLE LOAM, 3 TO 9 PERCENT SLOPES

NRCS Map Unit Name: 83 - WILEY-COLBY COMPLEX, 3 TO 5 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: 04/08/2016

List individual species: Cereal rye- Secal cereale, crested wheatgrass- Agropyron cristatum, smooth brome- Bromus inermis, desert madwort- Alyssum desertorum, and intermediate wheatgrass- Thinopyrum intermedium.

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): Cereal rye, crested wheatgrass, smooth brome, desert madwort, and intermediate wheatgrass

## WATER RESOURCES

Is this a sensitive area: ☐ No ☒ Yes

Distance to nearest

downgradient surface water feature: 71 Feet

water well: 1533 Feet

Estimated depth to ground water at Oil and Gas Location 87 Feet

Basis for depth to groundwater and sensitive area determination:

Nearest Surface Water Features

Ditch: 71' E Elev: 5022'

Loc Elev: 5034'

Nearest water wells:

1533' NNE, Permit 47625-, depth 608', Static Water Level 168', Elev 5004'

4379' ESE, Permit 146429--A, depth 58', Static Water Level 16', Elev 4963'

Sensitive Area Determination: SENSITIVE AREA, downgradient surface water feature within 1,000'

Although the calculation for depth to groundwater results in an estimation of 87', based on experience and proximity to surface water features, we estimate depth to groundwater to be between 10' – 20'.

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

## 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>Existing Tank Battery Location #426172 will be consolidated with the new tank battery.</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: If the surface owner authorizes, and if it is feasible for this location at the time of drilling, water-based cuttings will be disposed of onsite using bioremediation/solidification product. If the surface owner does not authorize onsite disposal and/or it is not feasible for this location at the time of drilling, water-based cuttings will be disposed of using a Centralized E&amp;P Waste Management facility or a private spread field. 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. 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>Flow Lines: 33 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 tank battery, approximately 200'. The flowlines from Location #318184 will be approximately 725'.</p> <p>33 fuel gas 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 poly or steel pipe, buried, and will equal the distance between the well heads and the tank battery, approximately 200'. The distance from Location #318184 will be approximately 725'.</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 200'. From Location #318184 the distance will be approximately 725'.</p> <p>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>The right to construct this Oil and Gas Location is granted by an oil and gas lease and an executed Surface Use Agreement has been attached only as a matter of record.</p> |
|----------|---|

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

Signed: \_\_\_\_\_ Date: 05/23/2016 Email: DJREGULATORY@ANADARKO.COM

Print Name: CHERYL LIGHT 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: 7/7/2016

### **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                    | This proposed oil and gas location is located in a rural rangeland area. The nearest building unit is located 1988' away.  |
| 2 | Storm Water/Erosion Control | 604c.(2).G. Berm Construction: Kerr-McGee will create tertiary containment by construction of a berm or diversion dike, site grading, or other comparable measures sufficient to further protect the Ditch: 71' E Elev: 5022' of this proposed oil and gas location. |

Total: 2 comment(s)

### **Attachment Check List**

#### **Att Doc Num**

#### **Name**

|           |                         |
|-----------|-------------------------|
| 401040031 | FORM 2A SUBMITTED       |
| 401042382 | WELL LOCATION PLAT      |
| 401042390 | LOCATION DRAWING        |
| 401042391 | HYDROLOGY MAP           |
| 401042394 | NRCS MAP UNIT DESC      |
| 401042395 | MULTI-WELL PLAN         |
| 401042407 | WASTE MANAGEMENT PLAN   |
| 401042409 | REFERENCE AREA MAP      |
| 401042412 | SURFACE AGRMT/SURETY    |
| 401046618 | EXCEPTION LOC WAIVERS   |
| 401051161 | ACCESS ROAD MAP         |
| 401051163 | LOCATION PICTURES       |
| 401051166 | EXCEPTION LOC REQUEST   |
| 401051167 | REFERENCE AREA PICTURES |

Total Attach: 14 Files

## General Comments

| <u>User Group</u> | <u>Comment</u>   | <u>Comment Date</u>  |
|-------------------|--|----------------------|
| Permit            | Final Review Completed.  | 7/6/2016 8:57:20 AM  |
| Permit            | Permitting Review Complete.  | 6/30/2016 1:30:40 PM |
| OGLA              | Public comment from the LGD regarding county requirements. No members of the public contacted the LGD or COGCC regarding this location. Not in a buffer, exception, or UMA. OGLA review completed OGLA task passed.  | 6/23/2016 2:41:19 PM |
| OGLA              | Communication with Operator, changed interim reclamation to 3 acres from 0.9 acres. Contact Operator regarding cultural distances from production. Operator confirmed Form 2A distances were correct.  | 6/22/2016 1:36:59 PM |
| LGD               | This proposed oil and gas facility is located in unincorporated Weld County. The County expects operators and land owners to work together to ensure that a diligent effort has been made to conserve prime agricultural land. As of today's date June 17, 2016, the Weld County Oil and Gas Liaison/LGD has not been contacted regarding this proposed location. Oil and Gas Exploration and Production activities are currently considered a Use by Right in the Agricultural Zoned District and no land use permitting is required by the County. A building permit is required for the production facilities (tank battery, separators, pump jacks, etc.) from the Department of Planning Services. Access points from a County road require Access Permits from Public Works, which include traffic control plans. Use of a right-of-way requires a Right-Of-Way Permit from the Department of Public Works. Troy Swain, Weld Oil Gas Liaison (970) 400-3579. | 6/17/2016 8:58:25 AM |
| OGLA              | Talk to Operator via phone. Added info for depth to water based on experience. Waiting for reply on distance to BU.  | 6/13/2016 5:25:57 PM |
| OGLA              | OGLA review - Check with operator on distance from production to B.U. Depth to water is probably more shallow, but no water wells to indicate as such - will discuss with Operator. Already sensitive area for water resources.  | 6/7/2016 2:32:38 PM  |
| Permit            | Passed completeness.   | 5/30/2016 1:02:06 PM |

Total: 8 comment(s)