

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:

400565933

Date Received:

06/06/2014

Oil and Gas Location Assessment

New Location     Refile     Amend Existing Location    Location#: \_\_\_\_\_

Submit signed original form. 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:

**438232**

Expiration Date:

**07/22/2017**

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: SACK TANK BATTERY

Number: 3N-30HZ

County: WELD

Quarter: SESW    Section: 31    Township: 1N    Range: 67W    Meridian: 6    Ground Elevation: 5054

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: 569 feet FSL from North or South section line

2304 feet FWL from East or West section line

Latitude: 40.001904    Longitude: -104.934315

PDOP Reading: 6.0    Date of Measurement: 08/01/2013

Instrument Operator's Name: BEN HARDENBERGH

## 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)

436736

318736

## FACILITIES

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

Wells \_\_\_\_\_ Oil Tanks 1 Condensate Tanks \_\_\_\_\_ Water Tanks 1 Buried Produced Water Vaults \_\_\_\_\_  
Drilling Pits \_\_\_\_\_ Production Pits \_\_\_\_\_ Special Purpose Pits \_\_\_\_\_ Multi-Well Pits \_\_\_\_\_ Temporary Large Volume  
Pump Jacks \_\_\_\_\_ Separators 10 Injection Pumps \_\_\_\_\_ Cavity Pumps \_\_\_\_\_ Above Ground Tanks \_\_\_\_\_  
Gas or Diesel Motors \_\_\_\_\_ Electric Motors \_\_\_\_\_ Electric Generators \_\_\_\_\_ Fuel Tanks \_\_\_\_\_ Gas Compressors \_\_\_\_\_  
Dehydrator Units \_\_\_\_\_ Vapor Recovery Unit 4 VOC Combustor 4 Flare \_\_\_\_\_ LACT Unit 1  
Pigging Station \_\_\_\_\_

## OTHER FACILITIES

**Other Facility Type**

**Number**

Other Facility Type	Number
OIL PIPELINE	1
FLOW LINES	15
GAS PIPELINE	3

Per Rule 303.b.(3)C, description of all oil, gas, and/or water pipelines:

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

## CONSTRUCTION

Date planned to commence construction: 08/01/2014 Size of disturbed area during construction in acres: 2.30

Estimated date that interim reclamation will begin: 12/01/2014 Size of location after interim reclamation in acres: 2.30

Estimated post-construction ground elevation: 5054

## DRILLING PROGRAM

Will a closed loop system be used for drilling fluids: \_\_\_\_\_

Is H<sub>2</sub>S 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: SACK FAMILY LIMITED

Phone: 303.654.9856

Address: PARTNERSHIP LLLP

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

Address: 5100 E. 168TH AVE

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

City: THORNTON State: CO Zip: 80602

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 Use Agreement

Surface damage assurance if no agreement is in place: \_\_\_\_\_ Surface Surety ID: \_\_\_\_\_

Date of Rule 306 surface owner consultation 11/04/2013

## 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

Distance to nearest:

Building: 567 Feet  
Building Unit: 631 Feet  
High Occupancy Building Unit: 4714 Feet  
Designated Outside Activity Area: 5280 Feet  
Public Road: 365 Feet  
Above Ground Utility: 360 Feet  
Railroad: 1957 Feet  
Property Line: 365 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.

## 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.

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: 03/21/2014

## 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: 33 KIM LOAM, 3 TO 5 PERCENT SLOPES  
NRCS Map Unit Name: 40NUNN LOAM, 1 TO 3 PERCENT SLOPES  
NRCS Map Unit Name: \_\_\_\_\_

## PLANT COMMUNITY:

Complete this section only if any portion of the disturbed area of the location's current land use is on non-crop land.

Are noxious weeds present: Yes  No   
Plant species from:  NRCS or,  field observation Date of observation: \_\_\_\_\_  
List individual species: \_\_\_\_\_

Check all plant communities that exist in the disturbed area.

- Disturbed Grassland (Cactus, Yucca, Cheatgrass, Rye)  
 Native Grassland (Bluestem, Grama, Wheatgrass, Buffalograss, Fescue, Oatgrass, Brome)  
 Shrub Land (Mahogany, Oak, Sage, Serviceberry, Chokecherry)  
 Plains Riparian (Cottonwood, Willow, Aspen, Maple, Poplar, Russian Olive, Tamarisk)  
 Mountain Riparian (Cottonwood, Willow, Blue Spruce)  
 Forest Land (Spruce, Fir, Ponderosa Pine, Lodgepole Pine, Juniper, Pinyon, Aspen)  
 Wetlands Aquatic (Bullrush, Sedge, Cattail, Arrowhead)  
 Alpine (above timberline)  
 Other (describe): \_\_\_\_\_

## WATER RESOURCES

Is this a sensitive area:  No  Yes

Distance to nearest

downgradient surface water feature: 419 Feet

water well: 1050 Feet

Estimated depth to ground water at Oil and Gas Location 11 Feet

Basis for depth to groundwater and sensitive area determination:

Nearest surface water feature: 419' NE, Canal ,5045'

Well elevation: 5054'

Nearest water well(s):

1050' S, permit 132959, well depth 816', static water level 310' , well elevation 5045' fox hills

1402' SE, permit 65440, well depth 29', static water level 5', well elevation 5048'

Sensitive area determination: SENSITIVE AREA. Surface water feature within 1000' and depth to groundwater equal to or less than 20'.

Basis for depth to groundwater: Identified water well (Permit # 65440) located approximately 1402' SE of the proposed oil and gas location. Depth to groundwater at water well is 5' and the water well is at an elevation of approximately 5048'.

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: \_\_\_\_\_

## 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 Building Unit)
- 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

**PIPELINES AND FLOW LINES DESCRIPTION:**

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.

Flow Lines: Five 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 1000' (to Location #318736) and approximately 2000' (to Location #436736).

Five 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 1000' (to Location #318736) and approximately 2000' (to Location #436736).

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 1000' (to Location #318736) and approximately 2000' (to Location #436736).

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

Signed: \_\_\_\_\_ Date: 06/06/2014 Email: DJRegulatory@anadarko.com

Print Name: Ronett Powers Title: Regulatory Analyst II

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: Matthew Lee Director of COGCC Date: 7/23/2014

**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**

<u>COA Type</u>	<u>Description</u>

## Best Management Practices

<b>No</b>	<b>BMP/COA Type</b>	<b>Description</b>
1	Planning	604c.(2).R. Tank Specifications: A geosynthetic liner will be laid under the tanks on this location and a metal containment will be constructed. Storage tanks will be designed, constructed and maintained in accordance with National Fire Protection Association (NFPA) Code 30 (2008 version). KMG will maintain written records to verify proper design, construction and maintenance. All records will be available for inspection by the Director.
2	Planning	604c.(2).S. Access Roads: KMG will utilize a lease access road from Weld County Road 2 for drilling operations and maintenance equipment. The road will be properly constructed and maintained to accommodate for local emergency vehicle access. Water will be placed on dirt access roads to mitigate dust as needed. If feasible, magnesium chloride will also be used as needed on access roads to further abate dust.
3	Community Outreach and Notification	Discussed construction, operations and equipment with building unit owner located 886' from proposed location to ensure all questions were sufficiently answered and concerns addressed.
4	Traffic control	604c.(2).D. Traffic Plan: If required by the local government, a traffic plan will be coordinated with the local jurisdiction prior to commencement of operations.
5	General Housekeeping	604c.(2).P. Removal of Surface Trash: A commercial size trash bin for removing debris will be located on site. This bin will be for use by all parties affiliated with the operation.
6	Storm Water/Erosion Control	604c.(2).W. Site-Specific Measures: KMG maintains a Storm Water Management Plan that assesses erosion control for every KMG operated location. This location will be added to this plan once construction begins. This site will be inspected every fourteen (14) days during construction activities, every thirty (30) days after construction is completed, and after any major weather event.
7	Material Handling and Spill Prevention	604c.(2).F. Leak Detection Plan: Automation technology will be utilized at this facility. This technology includes the use of fluid level monitoring for the tanks and produced water sumps, high-level shut offs, and electronic sensors to monitor the interstitial space of double-walled produced water sumps. All automation is monitored by Kerr-McGee's Integrated Operations Center (IOC,) which is manned 24 hours per day, 7 days per week.
8	Material Handling and Spill Prevention	604c.(2).N. Control of Fire Hazards: KMG and its contractors will employ best management practices during the drilling and production of its wells and facilities and will comply with appropriate COGCC rules concerning safety and fire. KMG will ensure that any material that might be deemed a fire hazard will remain no less than twenty-five (25) feet from the wellhead(s), tanks and separator(s).
9	Construction	604c.(2).G. 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. 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 canal located 419' NE of the proposed oil and gas location.
10	Drilling/Completion Operations	604c.(2).C. Green Completions: KMG will install Vapor Recovery Unit(s) (VRU) to prevent uncontrolled venting of flash gas. Environmental Control Devices or Volatile Organic Compound Combustors (VOC) will be used to control working and breathing vapor losses for oil and water tanks. Temporary above ground polyethylene water pipelines will deliver water to location operations from larger trunk lines to reduce truck traffic and minimize air pollution.
11	Drilling/Completion Operations	604c.(2).K. Pit Level Indicators: All tanks (used in lieu of pits) contain pit level monitors with Electronic Drilling Recorders (EDR). KMG uses EDRs with pit level monitor(s) and alarm(s) for production rigs. Basic level gauges are used on tanks utilized for the surface rig.

Total: 11 comment(s)

## Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
1009651	306.e CERTIFICATION
400565933	FORM 2A SUBMITTED
400620084	FACILITY LAYOUT DRAWING
400620086	HYDROLOGY MAP
400620087	LOCATION DRAWING
400620105	LOCATION PICTURES
400620112	OTHER
400620114	NRCS MAP UNIT DESC
400620115	ACCESS ROAD MAP
400620116	SURFACE AGRMT/SURETY
400620117	WASTE MANAGEMENT PLAN

Total Attach: 11 Files

## General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final Review Completed. No LGD or public comment received.	7/23/2014 12:12:11 PM
Permit	Received and attached Rule 306.e certification to form 2A. ok to pass.	7/23/2014 12:11:58 PM
Permit	ON HOLD: requesting the Rule 306.e certification.	7/8/2014 10:42:31 AM
Permit	The Certification of Compliance with Rule 305.a is under other. ok to pass.	7/7/2014 8:48:53 AM
OGLA	Changed distance to nearest BU to match the distance shown on the Facility Layout Drawing as requested by KM.	6/23/2014 12:24:32 PM
OGLA	Requesting confirmation of distance to nearest BU.	6/18/2014 3:50:11 PM
Permit	Passed completeness.	6/10/2014 10:39:39 AM

Total: 7 comment(s)