

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:

400584875

Date Received:

04/14/2014

Oil and Gas Location Assessment

New Location     Refile     Amend Existing Location    Location#: 329103

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:

**329103**

Expiration Date:

**05/25/2017**

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: CRUICKSHANK

Number: 1C-24HZ

County: WELD

Quarter: SESE    Section: 24    Township: 3N    Range: 66W    Meridian: 6    Ground Elevation: 5014

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: 634 feet FSL from North or South section line

664 feet FEL from East or West section line

Latitude: 40.205369    Longitude: -104.718134

PDOP Reading: 1.8    Date of Measurement: 08/22/2012

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 #

Well Site is served by Production Facilities

400585364

## FACILITIES

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

Wells	<u>3</u>	Oil Tanks	<u>    </u>	Condensate Tanks	<u>    </u>	Water Tanks	<u>    </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>	Temporary Large Volume Above Ground Tanks	<u>    </u>
Pump Jacks	<u>2</u>	Separators	<u>    </u>	Injection Pumps	<u>    </u>	Cavity Pumps	<u>    </u>		
Gas or Diesel Motors	<u>    </u>	Electric Motors	<u>    </u>	Electric Generators	<u>    </u>	Fuel Tanks	<u>    </u>	Gas Compressors	<u>    </u>
Dehydrator Units	<u>    </u>	Vapor Recovery Unit	<u>    </u>	VOC Combustor	<u>    </u>	Flare	<u>    </u>	LACT Unit	<u>    </u>
								Pigging Station	<u>    </u>

## OTHER FACILITIES

Other Facility Type

Number

Temporary 500 bbl tanks	<u>2</u>
Flow lines	<u>6</u>

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 on-site 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 for flow line description.

## CONSTRUCTION

Date planned to commence construction: 05/30/2014 Size of disturbed area during construction in acres: 10.00

Estimated date that interim reclamation will begin: 08/30/2014 Size of location after interim reclamation in acres: 0.30

Estimated post-construction ground elevation: 5014

## 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? No

## DRILLING WASTE MANAGEMENT PROGRAM

Drilling Fluids Disposal: OFFSITE Drilling Fluids Disposal Method: Recycle/reuse

Cutting Disposal: OFFSITE Cuttings Disposal Method: Other

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:                     

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

## SURFACE & MINERALS & RIGHT TO CONSTRUCT

Name: Doris I, Jaymie R &  
Address: Robert V Cruickshank  
Address: 1024 Cimmaron Dr.

Phone: 970-388-8070  
Fax: \_\_\_\_\_  
Email: \_\_\_\_\_

City: Loveland State: CO Zip: 80537

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 03/12/2014

## 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: 3445 Feet  
Building Unit: 3445 Feet  
High Occupancy Building Unit: 5280 Feet  
Designated Outside Activity Area: 5280 Feet  
Public Road: 4610 Feet  
Above Ground Utility: 4640 Feet  
Railroad: 5280 Feet  
Property Line: 620 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: \_\_\_\_\_

## 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: 69 VALENT SAND, 0 TO 3 PERCENT SLOPES

NRCS Map Unit Name: 70 VALENT SAND, 3 TO 9 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: 10/17/2013

List individual species: sand sagebrush- *Oligosporus filifolius*, Russian thistle- *Salsola australis*, sand dropseed- *Sporobolus cryptandrus*, Narrowleaf Yucca- *Yucca Glauca*, Rocky Mountain Bee Plant- *Cleome serrulata*

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): Sand Sage Mixed Grass/Mixed Forb Rangeland

**WATER RESOURCES**

Is this a sensitive area:  No  Yes

Distance to nearest

downgradient surface water feature: 95 Feet

water well: 1424 Feet

Estimated depth to ground water at Oil and Gas Location 41 Feet

Basis for depth to groundwater and sensitive area determination:

Sensitive area determination: Surface water feature within 1000'.  
Basis for depth to groundwater: Identified water well (Permit # 16876) located approximately 95' south of the proposed oil and gas location. Depth to groundwater at water well is 17' and the water well is at an elevation of approximately 4995'.

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

**Other Disposal Description:**  
 Drilling fluids disposal: KMG will reuse water-based drilling fluids to the maximum extent at which point they will either be land applied or taken to a licensed, commercial disposal site; decided upon based off of laboratory analysis of fluids.  
 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&P Waste Management facility or a private spread field.

**Flow Lines:** Two additional 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 2800'.

Two additional 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 2800'.

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 2800'.

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

Signed: \_\_\_\_\_ Date: 04/14/2014 Email: DJRegulatory@anadarko.com

Print Name: Lauren Kucera 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: 5/26/2014

### 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.**

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

### Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
1	Planning	The nearest building unit is located 3445' away from this oil and gas location, therefore it is not within a Designated Setback Location and is exempt from 604.c.

Total: 1 comment(s)

## Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
400584875	FORM 2A SUBMITTED
400585074	REFERENCE AREA PICTURES
400585077	LOCATION PICTURES
400585081	ACCESS ROAD MAP
400585085	NRCS MAP UNIT DESC
400585090	HYDROLOGY MAP
400585092	LOCATION DRAWING
400585093	MULTI-WELL PLAN
400585095	WELL LOCATION PLAT
400585102	WASTE MANAGEMENT PLAN
400587655	SURFACE AGRMT/SURETY

Total Attach: 11 Files

## General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
OGLA	Review completed 5/22/2014.	5/22/2014 9:52:59 AM
Permit	Passes Permit review.	5/6/2014 11:34:14 AM
Permit	Passed Completeness.	4/18/2014 10:15:30 AM

Total: 3 comment(s)