

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:

400468821

Date Received:

09/09/2013

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:

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: 47120

Name: KERR-MCGEE OIL & GAS ONSHORE LP

Address: P O BOX 173779

City: DENVER    State: CO    Zip: 80217-3779

Contact Information

Name: Lauren Kucera

Phone: (720) 929-6107

Fax: (720) 929-7107

email: lauren.kucera@anadarko.com

RECLAMATION FINANCIAL ASSURANCE

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

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

LOCATION IDENTIFICATION

Name: BADDING    Number: 2N-26HZ

County: WELD

Quarter: SWSE    Section: 26    Township: 2N    Range: 66W    Meridian: 6    Ground Elevation: 5113

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: 350 feet FSL from North or South section line

1953 feet FEL from East or West section line

Latitude: 40.102987    Longitude: -104.741850

PDOP Reading: 1.4    Date of Measurement: 04/30/2013

Instrument Operator's Name: DAVID MACDONALD

## 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

400466531

## FACILITIES

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

Wells	5	Oil Tanks		Condensate Tanks		Water Tanks		Buried Produced Water Vaults	
Drilling Pits		Production Pits		Special Purpose Pits		Multi-Well Pits		Temporary Large Volume Above Ground Tanks	2
Pump Jacks	5	Separators		Injection Pumps		Cavity Pumps			
Gas or Diesel Motors		Electric Motors		Electric Generators		Fuel Tanks		Gas Compressors	
Dehydrator Units		Vapor Recovery Unit		VOC Combustor		Flare		LACT Unit	
								Pigging Station	

## OTHER FACILITIES

**Other Facility Type**

**Number**

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

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## CONSTRUCTION

Date planned to commence construction: 10/31/2013 Size of disturbed area during construction in acres: 10.00

Estimated date that interim reclamation will begin: 02/04/2014 Size of location after interim reclamation in acres: 0.10

Estimated post-construction ground elevation: 5113

## 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:

Drilling Fluids Disposal Method: Recycle/reuse

Cutting Disposal:

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: Shafer Elizabeth M et al

Phone: 303-669-2807

Address: 10904 Verna Lane

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

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

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

City: Northglenn State: CO Zip: 80234

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 06/12/2013

## 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: 735 Feet  
Building Unit: 735 Feet  
High Occupancy Building Unit: 5280 Feet  
Designated Outside Activity Area: 5280 Feet  
Public Road: 722 Feet  
Above Ground Utility: 595 Feet  
Railroad: 5280 Feet  
Property Line: 350 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: 07/24/2013

## 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: 44 OLNEY LOAMY SAND, 1 TO 3 PERCENT SLOPES

NRCS Map Unit Name: 74 VONA LOAMY SAND, 5 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: 07/19/2013

List individual species: cheatgrass- Bromus tectorum -(NOXIOUS WEED-C-List), sand sagebrush- Oligosporus filifolius, tall tumbled mustard - Sisymbrium altissimum, lemon scurfpea - Psoraleum lanceolatum.

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): Cheatgrass Mixed Grass/Mixed Forb Rangeland

## WATER RESOURCES

Is this a sensitive area: ☒ No ☐ Yes

Distance to nearest

downgradient surface water feature: 3475 Feet

water well: 915 Feet

Estimated depth to ground water at Oil and Gas Location 1251 Feet

Basis for depth to groundwater and sensitive area determination:

Sensitive area determination: None of the wells in this and adjacent qtr-qtrs have a depth less than 20'.  
Basis for depth to groundwater: The base of the Fox Hills Aquifer was estimated utilizing downhole logs of offset wells.  
Nearest water well: 915' SW, permit 237193, depth 200'

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 305.a.(2)

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>RULE 305.a.(2): NOTICE OF INTENT TO CONDUCT OIL AND GAS OPERATIONS WAS SENT TO THE SURFACE OWNER ON JULY 24, 2013. THE BUILDING UNIT OWNER WITHIN BUFFER ZONE HAS WAIVED RULE 305.a.(2). PLEASE SEE ATTACHED WAIVER AND REQUEST.</p> <p>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&amp;P Waste Management facility or a private spread field.</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: 09/09/2013 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: \_\_\_\_\_ 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**

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## **Best Management Practices**

<b>No</b>	<b>BMP/COA Type</b>	<b>Description</b>
1	Planning	604c.(2).A. Noise: This pad location is located in a rural rangeland area. The nearest building unit is located over one mile away.
2	Planning	604c.(2).S. Access Roads: KMG will utilize the lease access road from WCR 20 for drilling operations and maintenance equipment. The road will be properly constructed and maintained to accommodate for local emergency vehicle access.
3	General Housekeeping	604c.(2).N. Control of Fire Hazards: KMG will ensure that any material that might be deemed a fire hazard will be will remain no less than twenty-five (25) feet from the wellhead(s)
4	General Housekeeping	604c.(2).O. Loadlines: All loadlines shall be bullplugged or capped.
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	General Housekeeping	604c.(2).Q. Guy Line Anchors: Should guy line anchors be left buried for future use, they shall be identified by a bright marker greater than four (4) feet high and no more than one (1) foot east of the guy line anchor.
7	General Housekeeping	604c.(2).U. Identification of Plugged and Abandoned Wells: Pursuant to rule 319.a.(5)., once the well has been plugged and abandoned, KMG will identify the location of the wellbore with a permanent monument that will detail the well name and date of plugging
8	General Housekeeping	604c.(2).T. Well Site Cleared: The wellsite will be cleared of all non-essential equipment within ninety (90) days after all wells associated with the pad have been plugged and abandoned.
9	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.
10	Construction	604c.(2).E. Multiwell Pads: This application is part of a five-well pad.
11	Construction	604c.(2).M. No fencing is necessary for this location.
12	Drilling/Completion Operations	604c.(2).B. Closed Loop Drilling System: A closed loop drilling system will be utilized during drilling of the wells on this location.
13	Drilling/Completion Operations	604c.(2).C. Green Completions: KMG will install Vapor Recovery Unit(s) (VRU's) to prevent uncontrolled venting of flash gas. Environmental Control Devices (ECD) will be used to control working and breathing vapor losses for oil and water tanks. Produced oil and gas will be piped off of location to minimize air pollution.
14	Drilling/Completion Operations	604c.(2).H. BOPE: Our rigs at a minimum will have a double ram with blind and pipe ram; and annular preventer.
15	Drilling/Completion Operations	604c.(2).I. BOPE Testing for Drilling Operations: Upon initial rig-up, BOPE's will be tested at a minimum of every
16	Drilling/Completion Operations	604c.(2).J. BOPE for Well Servicing Operations: Blowout prevention equipment will be used on any servicing operations associated with this well. Backup stabbing valves will be used during any future servicing operations during reverse circulation. Valves shall be pressure tested before each well servicing operation using low-pressure air and high-pressure fluid.
17	Drilling/Completion Operations	604c.(2).L. Drill Stem Tests: No drill stem tests will be performed without prior approval from the director.
18	Drilling/Completion Operations	604c.(2).K. Pit Level Indicators: All mud pits contain pit level monitors with Electronic Drilling Recorders (EDR) KMG uses an Electronic Drilling Recorder (EDR) with pit level monitor(s) and alarm(s) for production rigs. Basic level gages are used on pits utilized for the surface rig.

Total: 18 comment(s)

### Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
400468821	FORM 2A SUBMITTED
400468906	ACCESS ROAD MAP
400468909	HYDROLOGY MAP
400468911	LOCATION PICTURES
400468912	MULTI-WELL PLAN
400468913	NRCS MAP UNIT DESC
400468914	SURFACE AGRMT/SURETY
400468916	WELL LOCATION PLAT
400468917	REFERENCE AREA PICTURES
400476584	WASTE MANAGEMENT PLAN
400476588	LOCATION DRAWING
400485845	WAIVERS

Total Attach: 12 Files

### General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Location drawing shows buildings within 1000'. Opr has not addressed the buffer zone. Form back to draft.	9/10/2013 8:58:21 AM

Total: 1 comment(s)