

**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:

400476069

Date Received:

09/06/2013

Oil and Gas Location Assessment☐ New Location ☐ Refile ☒ Amend Existing Location Location#: 428011

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:

428011

Expiration Date:

11/08/2016☒ 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: XCEL Number: 12N-22HZ

County: WELD

QuarterQuarter: SWSW Section: 27 Township: 1N Range: 67W Meridian: 6 Ground Elevation: 5026

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: 496 feet FSL from North or South section line

403 feet FWL from East or West section line

Latitude: 40.016186 Longitude: -104.884610

PDOP Reading: 1.7 Date of Measurement: 01/16/2013

Instrument Operator's Name: Bart Pheiffer

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	9	Oil Tanks	48	Condensate Tanks		Water Tanks	12	Buried Produced Water Vaults	
Drilling Pits		Production Pits		Special Purpose Pits		Multi-Well Pits		Temporary Large Volume Above Ground Tanks	
Pump Jacks	3	Separators	12	Injection Pumps		Cavity Pumps			
Gas or Diesel Motors		Electric Motors		Electric Generators		Fuel Tanks		Gas Compressors	
Dehydrator Units		Vapor Recovery Unit		VOC Combustor	12	Flare	12	LACT Unit	
								Pigging Station	

OTHER FACILITIES

Other Facility Type

Number

Oil Pipeline	1
500 Barrel skid mounted frack tank	2
Gas Pipeline	1

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

Buried pipelines will be utilized to gather the gas and oil product from the location (1 gas pipeline, 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.

CONSTRUCTION

Date planned to commence construction: 11/15/2013 Size of disturbed area during construction in acres: 10.00
Estimated date that interim reclamation will begin: 02/15/2014 Size of location after interim reclamation in acres: 2.00
Estimated post-construction ground elevation: 5026

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?

DRILLING WASTE MANAGEMENT PROGRAM

Drilling Fluids Disposal: OFFSITE

Drilling Fluids Disposal Method: Recycle/reuse

Cutting Disposal: _____

Cuttings Disposal Method: _____

Other Disposal Description:

KMG will reuse drilling fluids to maximum extent then will either be land applied or taken to a commercial disposal site. Cuttings will be land applied and treated with a bioremediation/solidification product.

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: _____

Phone: _____

Address: _____

Fax: _____

Address: _____

Email: _____

City: _____ State: _____ Zip: _____

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: _____

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 01/23/2013

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: 618 Feet
Building Unit: 1549 Feet
High Occupancy Building Unit: 5280 Feet
Designated Outside Activity Area: 5280 Feet
Public Road: 400 Feet
Above Ground Utility: 472 Feet
Railroad: 5280 Feet
Property Line: 400 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 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: 79; Weld Loam, 1 to 3 Percent

NRCS Map Unit Name: 82; Wiley-Colby complex, 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: 3518 Feet

water well: 305 Feet

Estimated depth to ground water at Oil and Gas Location 12 Feet

Basis for depth to groundwater and sensitive area determination:

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 _____

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

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

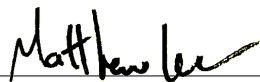
Signed: _____ Date: 09/06/2013 Email: laura.abrams@anadarko.com

Print Name: Laura Abrams

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: 11/9/2013

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

	Final Review Completed. No LGD or public comment received.
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Best Management Practices

No BMP/COA Type

Description

1	Planning	604c.(2).S. Access Roads: KMG will utilize the lease access road from WCR 4 for drilling operations and maintenance equipment. The road will be properly constructed and maintained to accommodate for local emergency vehicle access.
2	Planning	604c.(2).V. Development From Existing Well Pads: KMG is developing three new reservoirs on an existing six-well well pad.
3	Traffic control	604c.(2).D. Traffic Plan: KMG will use Weld County roads. No additional traffic plans were required and or requested.
4	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), tanks and separator(s).
5	General Housekeeping	604c.(2).O. Loadlines: All loadlines shall be bullplugged or capped.
6	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.
7	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.
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	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.
10	General Housekeeping	604c.(2).W. Site-specific Measures: KMG maintains a Stormwater Management Plan that includes each wellsite location that assesses erosion control for each well pad. This plan is updated every fourteen (14) days and after any major weather event.
11	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.
12	Construction	604c.(2).M. Fencing Requirements: Per specific landowner request, no fencing will be installed to avoid interfering with farming operations.

13	Noise mitigation	604c.(2).A. Noise: A sound mitigation burier (hay bales) will be placed on the north and west side of the pad location to damper noise during drilling and completions to the nearby Weld County road 4 and 19. Sound surveys have been conducted on each rig type; which is utilized to anticipate any additional noise mitigation if necessary.
14	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.
15	Drilling/Completion Operations	604c.(2).E. Multiwell Pads: This application is part of a nine-well pad (six existing, three new).
16	Drilling/Completion Operations	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.
17	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.
18	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 30-days.
19	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.
20	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.
21	Drilling/Completion Operations	604c.(2).L. Drill Stem Tests: No drill stem tests will be performed without prior approval from the director.

Total: 21 comment(s)

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
1667904	NRCS MAP UNIT DESC
1667905	CORRESPONDENCE
1667906	CORRESPONDENCE
1695960	EXCEPTION LOC WAIVERS
1695967	EXCEPTION LOC REQUEST
400476069	FORM 2A SUBMITTED
400477407	SURFACE AGRMT/SURETY
400477416	WASTE MANAGEMENT PLAN
400477417	ACCESS ROAD MAP
400477418	HYDROLOGY MAP
400477419	LOCATION DRAWING
400477421	LOCATION PICTURES
400477422	WELL LOCATION PLAT
400477427	MULTI-WELL PLAN
400477639	NRCS MAP UNIT DESC

Total Attach: 15 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Per operator Building unit not in Buffer Zone. Removed date Buffer Zone notice sent. ok to pass.	11/6/2013 10:42:31 AM
OGLA	Operator provided additional info that location is not within the Buffer Zone as nearest Building was erroneously believed to be a Building Unit. Nearest Building Unit was listed as 621 feet, now 1,549 feet. Per operator, revised the Facilities section, Soil section, revised estimated depth to groundwater. OGLA review complete and task passed.	11/6/2013 8:37:56 AM
Permit	Received Exception Location & Twinning request and waiver. ok to pass.	11/1/2013 8:40:15 AM
OGLA	Location in Buffer within Buffer Zone, need Facility Layout Drawing and proof pre-application notices were sent out to Building Unit owners	10/1/2013 8:14:50 AM
Permit	Per operator changed 1.) Drilling fluids disposal will be offsite. 2.) The surface owner is not the mineral owner. The "is committed to an O&G lease" box should not have been checked for any well on this pad. 3.) This well pad is in the buffer zone only. 4.) Water sampling rule 318A. ON HOLD: SHL not within window per SUA. Needs Exception Location & Twinning request and waiver.	9/24/2013 10:54:26 AM
Permit	ON HOLD: SHL not within window per SUA. Needs Exception Location & Twinning request and waiver. Needs onsite or offsite for Drilling fluids Needs Is Surface owner the Mineral owner and committed to O&G lease. Is location in Urban Mitigation Area? or just Buffer Zone? Needs Water sampling rule.	9/23/2013 9:45:39 AM
Permit	Passed completeness.	9/9/2013 7:20:14 AM

Total: 7 comment(s)