

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:

400765754
(SUBMITTED)

Date Received:

02/27/2015

Oil and Gas Location Assessment

New Location Refile Amend Existing Location Location#: 418100

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:

418100

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: 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: ENCORE TANK BATTERY Number: 41N-12HZ
 County: LARIMER
 Quarter: NENW Section: 12 Township: 5N Range: 68W Meridian: 6 Ground Elevation: 4979

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: 432 feet FNL from North or South section line
2404 feet FWL from East or West section line

Latitude: 40.420358 Longitude: -104.955458

PDOP Reading: 6.0 Date of Measurement: 10/01/2013

Instrument Operator's Name: ALAN HNIZDO

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)

400765753

418100

FACILITIES

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

Wells	7	Oil Tanks*	0	Condensate Tanks*	14	Water Tanks*	3	Buried Produced Water Vaults*	0
Drilling Pits		Production Pits*	0	Special Purpose Pits		Multi-Well Pits*	0	Modular Large Volume Tanks	
Pump Jacks		Separators*	8	Injection Pumps*	0	Cavity Pumps*	0	Gas Compressors*	0
Gas or Diesel Motors*	0	Electric Motors		Electric Generators*	0	Fuel Tanks*	0	LACT Unit*	0
Dehydrator Units*	0	Vapor Recovery Unit*	4	VOC Combustor*	5	Flare*	0	Pigging Station*	0

OTHER FACILITIES*

Other Facility Type

Number

FLOW LINES	29
GAS PIPELINES	3
OIL PIPELINE	1

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:

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

CONSTRUCTION

Date planned to commence construction: 06/01/2015 Size of disturbed area during construction in acres: 4.00

Estimated date that interim reclamation will begin: 12/31/2015 Size of location after interim reclamation in acres: 4.00

Estimated post-construction ground elevation: 4979

DRILLING PROGRAM

Will a closed loop system be used for drilling fluids: _____

Is H₂S 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: CLYDE & JANICE HEMBERGER

Phone: 970.663.2970

Address: 2490 N COUNTY ROAD 3

Fax: _____

Address: _____

Email: _____

City: ERIE State: CO Zip: 80516

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 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

Provide the distance to the nearest cultural feature as measured from Wells or Production Facilities onsite.

	From WELL	From PRODUCTION FACILITY
Building:	910 Feet	737 Feet
Building Unit:	910 Feet	737 Feet
High Occupancy Building Unit:	5280 Feet	5280 Feet
Designated Outside Activity Area:	5280 Feet	5280 Feet
Public Road:	2411 Feet	2233 Feet
Above Ground Utility:	360 Feet	635 Feet
Railroad:	5280 Feet	5280 Feet
Property Line:	300 Feet	1 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.
- 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.

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: 01/07/2015

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.

Additional production equipment will be placed on this existing location to serve the existing wells on this location and the proposed new wells on the ENCORE 41N-12HZ Location (Doc # 400765753) in an effort to reduce surface impact. Any other viable location on this surface owner's property would have resulted in a greater impact to offset building unit owners, either in number proximity.

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: 115 WELD SILT LOAM, 0 TO 3 PERCENT SLOPES

NRCS Map Unit Name: _____

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: 5280 Feet

water well: 3226 Feet

Estimated depth to ground water at Oil and Gas Location 100 Feet

Basis for depth to groundwater and sensitive area determination:

Basis for depth to groundwater: Identified water well (Permit # 7255) located approximately 6608' S of the proposed oil and gas location. Depth to groundwater at water well is 20' and the water well is at an elevation of approximately 4917'.

Nearest surface water features:

None within a mile

Loc Elev: 4979'

Nearest water wells:

3226' NE, Permit 253421, depth 430', Static Water Level 185', Elev 5027'

6608' S, Permit 7255, depth 34', Static Water Level 20', Elev 4917'

Sensitive Area Determination: NOT A SENSITIVE AREA.

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.a.(1)A. Exception Location (existing or approved Oil & Gas Location now within a Designated Setback as a result of

- 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: Twelve 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' to the location associated with Form 2A Doc No. 400765753.

Twelve 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' to the location associated with Form 2A Doc No. 400765753.

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' to the location associated with Form 2A Doc No. 400765753.

There are no surface water features within one mile of this proposed location, therefore no hydrology map is attached (per COGCC Guidance, October 2014).

Please note that the existing production facilities on this oil and gas location will be removed and the proposed facilities in this Location Assessment will replace the current facilities.

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

Signed: _____ Date: 02/27/2015 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: _____ 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.

Best Management Practices

No	BMP/COA Type	Description
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 County Road 3 for drilling and production 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	Planning	604c.(2).V. Development From Existing Well Pads: KMG will locate the proposed new production facilities on the existing well pad with location ID #418100 to reduce the amount of surface disturbance associated with this project.
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	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.
9	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.
10	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: 10 comment(s)

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
400765754	FORM 2A SUBMITTED
400800569	LOCATION DRAWING
400800570	LOCATION PICTURES
400800576	ACCESS ROAD MAP
400800577	NRCS MAP UNIT DESC
400800578	SURFACE AGRMT/SURETY
400800580	FACILITY LAYOUT DRAWING
400800581	OTHER
400800582	WASTE MANAGEMENT PLAN

Total Attach: 9 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Returned to draft per OGLA review.	3/6/2015 1:40:52 PM
OGLA	Buffer Zone Review - Facilities list does list any wells but there are seven existing wells on the Location, update Facilities list to include all existing wells. Cultural Distance section does not list distance from nearest existing well to any cultural feature, update the Cultural Distances.	3/6/2015 9:33:29 AM
Permit	Located within buffer zone; referred to OGLA for further review.	3/2/2015 7:39:14 AM

Total: 3 comment(s)