

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:

400856673

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Date Received:

07/07/2015

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:

442961

Expiration Date:

08/22/2018

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: CRAIG RICHARDSON

Phone: (720) 929-6092

Fax: (720) 929-7092

email: craig.richardson@anadarko.com

RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20010124 Gas Facility Surety ID: _____

Waste Management Surety ID: _____

LOCATION IDENTIFICATION

Name: SUNFLOWER

Number: 24N-17HZ

County: WELD

Quarter: SWNE Section: 8 Township: 2N Range: 65W Meridian: 6 Ground Elevation: 4901

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: 2489 feet FNL from North or South section line

1320 feet FEL from East or West section line

Latitude: 40.153695 Longitude: -104.683034

PDOP Reading: 1.2 Date of Measurement: 11/07/2014

Instrument Operator's Name: Bart Pfeifer

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 # 429782 **FORM 2A DOC #** _____

Well Site is served by Production Facilities

FACILITIES

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

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

OTHER FACILITIES*

Other Facility Type

Number

TEMPORARY 500 BBL TANKS	<u>2</u>
FLOW LINES	<u>21</u>

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.

Two 500 barrel skid-mounted frac tanks will be temporarily placed onsite for use of the pre-spud rig only. One tank will store water and the other will store water-based mud.

CONSTRUCTION

Date planned to commence construction: 08/29/2015 Size of disturbed area during construction in acres: 7.50

Estimated date that interim reclamation will begin: 02/29/2016 Size of location after interim reclamation in acres: 0.10

Estimated post-construction ground elevation: 4901

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? Yes

DRILLING WASTE MANAGEMENT PROGRAM

Drilling Fluids Disposal: OFFSITE Drilling Fluids Disposal Method: Commercial Disposal

Cutting Disposal: OFFSITE Cuttings Disposal Method: Commercial Disposal

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: TEN HAND TRUST

Phone: 303-536-9354

Address: 8029 COUNTY ROAD 39

Fax: _____

Address: _____

Email: _____

City: FORT LUPTON State: CO Zip: 80621

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 11/04/2014

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

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

	From WELL	From PRODUCTION FACILITY
Building:	889 Feet	_____ Feet
Building Unit:	1115 Feet	_____ Feet
High Occupancy Building Unit:	3263 Feet	_____ Feet
Designated Outside Activity Area:	5280 Feet	_____ Feet
Public Road:	1226 Feet	_____ Feet
Above Ground Utility:	1204 Feet	_____ Feet
Railroad:	5280 Feet	_____ Feet
Property Line:	180 Feet	_____ 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: _____

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.

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: 45 OLNEY LOAMY SAND, 3 TO 5 PERCENT SLOPES
 NRCS Map Unit Name: 72 VONA LOAMY SAND, 0 TO 3 PERCENT SLOPES

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: 1920 Feet

water well: 304 Feet

Estimated depth to ground water at Oil and Gas Location 38 Feet

Basis for depth to groundwater and sensitive area determination:

Ditch: 1920' N, Elev: 4879'
Loc Elev: 4901'
Nearest water wells:
304' E, Permit 11583, depth 45', Static Water Level 25', elevation 4888'
Sensitive Area Determination: NOT A SENSITIVE AREA

ground water calc: (4901-4888) + 25 +38

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: No

Is the Location within a Floodplain? No Yes Floodplain Data Sources Reviewed (check all that apply)

Federal (FEMA)

State

County

Local

Other

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 & 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: 7 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 971'.

7 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 971'.

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 971'.

The right to construct this Oil and Gas Location is granted by an oil and gas lease and an executed Surface Use Agreement has been attached only as a matter of record.

No surface water features within 1000', Hydrology Map is not required.

Location Pictures - The West directional photo taken on 11/7/2014 was not acceptable quality. On March 27, 2015 the Surface Landman returned to the location and taken a new photo to provide for the West directional.

OTHER DISPOSAL DESCRIPTION:

Drilling fluids disposal: KMG will reuse water-based drilling fluids to the maximum extent possible, at which point they will either be land applied or taken to a licensed, commercial disposal site; the decision will be based upon laboratory analysis of fluids.

Cuttings disposal: Water-based cuttings will be disposed of using a Centralized E&P Waste Management facility or private spread field depending on what is feasible at the time of drilling.

KMG will reuse oil-based drilling fluids to the maximum extent possible, at which point they will be returned to the fluids manufactures for reconditioning or disposal at a licensed, commercial disposal site. Oil based cuttings will be disposed of offsite and at a licensed, commercial disposal site.

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

Signed: _____ Date: 07/07/2015 Email: craig.richardson@anadarko.com

Print Name: Craig Richardson 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: 8/23/2015

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

	Operator shall provide notice to COGCC 48 hours prior to commencing construction of this Oil and Gas Location via Form 42 per Rule 316C.c.
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Best Management Practices

No BMP/COA Type

Description

1	Planning	The nearest building unit is located 1,115' away from this oil and gas location, therefore it is not within a Designated Setback Location and is exempt from 604.c.
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Total: 1 comment(s)

Attachment Check List

Att Doc Num

Name

400856673	FORM 2A SUBMITTED
400858019	LOCATION DRAWING
400858021	WELL LOCATION PLAT
400858026	MULTI-WELL PLAN
400858035	NRCS MAP UNIT DESC
400858038	WASTE MANAGEMENT PLAN
400864177	ACCESS ROAD MAP
400864223	SURFACE AGRMT/SURETY
400868378	LOCATION PICTURES

Total Attach: 9 Files

General Comments

User Group

Comment

Comment Date

Permit	Final Review Completed. No LGD or public comment received.	8/20/2015 12:14:01 PM
OGLA	OGLA review is complete. No public comments received. OGLA task passed.	8/17/2015 11:35:57 AM
OGLA	Spoke with Operator on the phone and concurs with changes regarding distance from FSL to FNL and adding wording for OBM and Water based to the comments section.	8/17/2015 11:12:42 AM
OGLA	Distance from wells to section line is listed as FSL yet well location plat has distance to the north section line. Operator lists both OBM and indicates water based fluids/cuttings from WMP. Contact the Operator for clarification and to change surface to N from S. No Hydrology map attached as no surface water within 1,000 ft. OK by COGCC guidance.	8/16/2015 1:32:55 PM
Permit	Permitting Review Complete.	7/29/2015 2:34:20 PM
Permit	Passed completeness.	7/15/2015 2:27:58 PM
Permit	Returned to draft. 1.) Location Pictures attachment is inaccurate-last photo was taken a different date than the previous pictures. 2.) Hydrology Map attachment is missing.	7/14/2015 8:23:44 AM

Total: 7 comment(s)