

FORM  
2A

Rev  
04/18

# 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:

401851025

Date Received:

## Oil and Gas Location Assessment

New Location     Refile     Amend Existing Location    Location#: \_\_\_\_\_

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: 35080  
 Name: GRAND MESA OPERATING CO  
 Address: 1700 N. WATERFRONT PKWY BL 600  
 City: WICHITA      State: KS      Zip: 67206

### Contact Information

Name: MICHAEL REILLY  
 Phone: (316) 265-3000  
 Fax: (316) 265-3455  
 email: MREILLY@GMOCKS.COM

### FINANCIAL ASSURANCE

- Plugging and Abandonment Bond Surety ID (Rule 706): 20020080     Gas Facility Surety ID (Rule 711): \_\_\_\_\_
- Waste Management Surety ID (Rule 704): \_\_\_\_\_

### LOCATION IDENTIFICATION

Name: MAMMOTH CAVE      Number: 1-11  
 County: LINCOLN  
 Quarter: NESW    Section: 11    Township: 7S    Range: 55W    Meridian: 6    Ground Elevation: 5423

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: 2185 feet FSL from North or South section line  
2381 feet FWL from East or West section line

Latitude: 39.452780      Longitude: -103.520770

PDOP Reading: 1.6      Date of Measurement: 11/21/2018

Instrument Operator's Name: ELIJAH FRANE-FRANE SURVEYING

## 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

                     401851108

## FACILITIES

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

Wells	<u>1</u>	Oil Tanks*	<u>          </u>	Condensate Tanks*	<u>          </u>	Water Tanks*	<u>          </u>	Buried Produced Water Vaults*	<u>          </u>
Drilling Pits	<u>1</u>	Production Pits*	<u>          </u>	Special Purpose Pits	<u>          </u>	Multi-Well Pits*	<u>          </u>	Modular Large Volume Tanks	<u>          </u>
Pump Jacks	<u>1</u>	Separators*	<u>          </u>	Injection Pumps*	<u>          </u>	Cavity Pumps*	<u>          </u>	Gas Compressors*	<u>          </u>
Gas or Diesel Motors*	<u>          </u>	Electric Motors	<u>          </u>	Electric Generators*	<u>          </u>	Fuel Tanks*	<u>          </u>	LACT Unit*	<u>          </u>
Dehydrator Units*	<u>          </u>	Vapor Recovery Unit*	<u>          </u>	VOC Combustor*	<u>          </u>	Flare*	<u>          </u>	Pigging Station*	<u>          </u>

## OTHER FACILITIES\*

**Other Facility Type**

**Number**

Other Facility Type	Number

\*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:

If this well is successful - a flowline from the well to the tank battery will be installed. One 3" poly pipe- pressurized 0-40# PSI and buried at least 4' below the ground surface. The tank battery will be used solely for the Mammoth Cave #1-11 well and will be located 75-100' FSL off of CR 3V and approximately 3110' FWL off of CR 29. We will do a separate 2A for the Tank Battery Facility with the Layout pictures, etc.

## CONSTRUCTION

Date planned to commence construction: 01/02/2019 Size of disturbed area during construction in acres: 5.00  
Estimated date that interim reclamation will begin: 07/02/2019 Size of location after interim reclamation in acres: 2.00  
Estimated post-construction ground elevation: 5423

## DRILLING PROGRAM

Will a closed loop system be used for drilling fluids: No

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: ONSITE Drilling Fluids Disposal Method: Evaporation

Cutting Disposal: ONSITE Cuttings Disposal Method: Drilling pit

Other Disposal Description:

Evaporation and burial. We will let fluids evaporate and then test the pit to make sure that the levels fall within the 910-1 COGCC tables before closing the pit.

Beneficial reuse or land application plan submitted? No

Reuse Facility ID:                      or Document Number:                     

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

## SURFACE & MINERALS & RIGHT TO CONSTRUCT

Name: Rudder Brothers, LLC

Phone: \_\_\_\_\_

Address: 28920 Co Rd 3W

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

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

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

City: Genoa State: CO Zip: 80818

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: Bond

Surface damage assurance if no agreement is in place: Blanket Surface Surety ID: 20180203

Date of Rule 306 surface owner consultation 11/07/2018

## 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:	3677 Feet	_____ Feet
Building Unit:	3730 Feet	_____ Feet
High Occupancy Building Unit:	5280 Feet	_____ Feet
Designated Outside Activity Area:	5280 Feet	_____ Feet
Public Road:	2185 Feet	_____ Feet
Above Ground Utility:	2185 Feet	_____ Feet
Railroad:	5280 Feet	_____ Feet
Property Line:	2185 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

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: \_\_\_\_\_

- 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.
- Large UMA Facility - as defined in 100-Series Rules.

## 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: Ascalon sandy loam - Symbol 105 - Wellsite

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: 11/27/2018

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: 2882 Feet

water well: 4026 Feet

Estimated depth to ground water at Oil and Gas Location 0 Feet

Basis for depth to groundwater and sensitive area determination:

This well is located in a Sensitive area due to it being located in the Arikaree Designated Ground Water Mgmt area and the Northern High Plains Basin. Wtr well Permit #23551F Irrigation 4026' away (no static wtr level reported). Arikaree River is 2882' away.

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 609

## WILDLIFE

This location is included in a Wildlife Mitigation Plan

This location was subject to a pre-consultation meeting with CPW held on \_\_\_\_\_

### Operator Proposed Wildlife BMPs

No BMP

### DESIGNATED SETBACK LOCATION EXCEPTIONS

Check all that apply:

- Rule 604.a.(1)A. Exception Zone (within 500' of a Building Unit) and is in an Urban Mitigation Area
- 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 There is a surface water area that exists 958' to the East of our wellpad. Also there is an underground H2O line that falls approximately 93' North and a barbed wire fence that falls approx. 349' North and an H2O cattle tank that exists approx. 490' East of our proposed well pad. The only improvements that lie within the 500'-1000' buffer area of the wellsite are the water line, the barbed wire fence and the H2O Cattle tank.

BMP Plan  
Grand Mesa Operating, Co.  
1700 N Waterfront Pkwy, Bldg 600  
Wichita, KS 67206  
P - 316-265-3000 F - 316-265-3455

Certification of Discharge under CDPHE COR-030000  
Storm water discharges associated with construction permit number (Not yet assigned)

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

Signed: \_\_\_\_\_ Date: \_\_\_\_\_ Email: MREILLY@GMOCKS.COM

Print Name: MICHAEL REILLY Title: President

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**

## Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
1	Planning	<p>Prior to construction, perimeter controls will be installed utilizing cutting from the clearing operations.</p> <p>Once the well pad has been constructed a variety of BMP's shall be utilized for the site specific conditions.</p> <p>BMP's to be utilized may include, but are not limited to:</p> <ul style="list-style-type: none"> <li>-Dirt berms</li> <li>-Erosion control blankets</li> <li>-Straw bale barrier</li> <li>-Straw wattle</li> <li>-Check dams</li> <li>-Culvert/Culvert Protection</li> <li>-Silt Fence</li> <li>-Surface roughening/Surface rip</li> </ul> <p>Storm Water Management Plan (SWMP) is on file in Grand Mesa Operating, Co office. Spill Prevention, Control and Countermeasure Plan is on file in Grand Mesa Operating, Co. office.</p>

Total: 1 comment(s)

## Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
401851086	ACCESS ROAD MAP
401851089	LOCATION PICTURES
401851091	HYDROLOGY MAP
401851092	LOCATION PICTURES
401851093	LOCATION DRAWING
401851094	NRCS MAP UNIT DESC
401851095	REFERENCE AREA MAP
401851096	REFERENCE AREA PICTURES
401851097	OTHER
401860056	OTHER

Total Attach: 10 Files

## General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
		Stamp Upon Approval

Total: 0 comment(s)

## **Public Comments**

No public comments were received on this application during the comment period.