

FORM
2A

Rev
02/20

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:

402128473

Date Received:

12/09/2019

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 <https://cogcc.state.co.us/> for all accompanying information pertinent this Oil and Gas Location Assessment.

Location ID:

479188

Expiration Date:

01/11/2024

☒ 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: 61250

Name: MULL DRILLING COMPANY INC

Address: 1700 N WATERFRONT PKWY B#1200

City: WICHITA State: KS Zip: 67206-6637

Contact Information

Name: James Beilman

Phone: (316) 807-8880

Fax: (316) 264-6440

email: jbeilman@Mulldrilling.com

FINANCIAL ASSURANCE

☒ Plugging and Abandonment Bond Surety ID (Rule 706): 20000063 ☐ Gas Facility Surety ID (Rule 711): _____

☐ Waste Management Surety ID (Rule 704): _____

LOCATION IDENTIFICATION

Name: BSR "A" Number: 1-19

County: LINCOLN

Quarter: SE Section: 19 Township: 12S Range: 53W Meridian: 6 Ground Elevation: 4927

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: 1364 feet FNL from North or South section line

2481 feet FWL from East or West section line

Latitude: 38.991030 Longitude: -103.377470

GPS Quality Value: 2.0 Type of GPS Quality Value: PDOP Date of Measurement: 06/16/2019

Instrument Operator's Name: Elijah Frane

LOCAL GOVERNMENT INFORMATION

County: LINCOLN Municipality: N/A

Per § 34-60-106 (1)(f)(I)(A), the following questions pertain to the "local government with jurisdiction to approve the siting of the proposed oil and gas location."

The local government with jurisdiction is: County _____

Does the local government with jurisdiction regulate the siting of Oil and Gas Locations, with respect to this location? If the local government does regulate the siting, but has waived its right to precede the COGCC in siting determination, indicate by selecting "YES" here and selecting "Waived" for the disposition below. ☐ Yes ☒ No

If yes, in checking this box, I hereby certify that an application has been filed with the local government with jurisdiction to approve the siting of the proposed oil and gas location. ☐

The local government siting permit type is: _____

The local government siting permit was filed on: _____

The disposition of the application filed with the local government is: Waived

Additional explanation of local process:

Local County Land Use Administrator Fred Lundy waived any specific authorization. Lincoln County SB 19-181 letter attached.

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 | <u>1</u> | Oil Tanks* | <u>2</u> | Condensate Tanks* | <u>0</u> | Water Tanks* | <u>1</u> | Buried Produced Water Vaults* | <u>0</u> |
| Drilling Pits | <u>1</u> | Production Pits* | <u>0</u> | Special Purpose Pits | <u>0</u> | Multi-Well Pits* | <u>0</u> | Modular Large Volume Tanks | <u>0</u> |
| Pump Jacks | <u>1</u> | Separators* | <u>1</u> | Injection Pumps* | <u>0</u> | Cavity Pumps* | | Gas Compressors* | <u>0</u> |
| Gas or Diesel Motors* | <u>1</u> | Electric Motors | <u>1</u> | Electric Generators* | <u>0</u> | Fuel Tanks* | <u>1</u> | LACT Unit* | <u>0</u> |
| Dehydrator Units* | <u>0</u> | Vapor Recovery Unit* | | VOC Combustor* | <u>1</u> | Flare* | <u>0</u> | Pigging Station* | <u>0</u> |

OTHER FACILITIES*

| <u>Other Facility Type</u> | <u>Number</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:

We will be including one Poly/Fiberglass Line to the Tank Battery buried at least 48" BGS (Below Ground Surface). Additionally Manifold lines will be attached between the two Oil Tanks.

CONSTRUCTION

Date planned to commence construction: 03/01/2021 Size of disturbed area during construction in acres: 5.70
Estimated date that interim reclamation will begin: 06/30/2021 Size of location after interim reclamation in acres: 2.85
Estimated post-construction ground elevation: 4927

DRILLING PROGRAM

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

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? 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: Big Sandy Ranch Co., LLC

Phone: 303-955-2534

Address: P.O. Box 368

Fax: _____

Address: _____

Email: _____

City: Littleton State: CO Zip: 80120

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 06/09/2019

If this Form 2A is associated with Drilling and Spacing Unit applications, list docket number(s): _____

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: | 5280 | Feet | 5280 | Feet |
| Building Unit: | 5280 | Feet | 5280 | Feet |
| High Occupancy Building Unit: | 5280 | Feet | 5280 | Feet |
| Designated Outside Activity Area: | 5280 | Feet | 5280 | Feet |
| Public Road: | 5280 | Feet | 5280 | Feet |
| Above Ground Utility: | 5280 | Feet | 5280 | Feet |
| Railroad: | 5280 | Feet | 5280 | Feet |
| Property Line: | 1364 | Feet | 1114 | Feet |
| School Facility:: | 5280 | Feet | 5280 | Feet |
| School Property Line: | 5280 | Feet | 5280 | Feet |
| Child Care Center: | 5280 | Feet | 5280 | 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, Designated Outside Activity Area, School Facility, and Child Care Center – as defined in 100 Series Rules.
- For measurement purposes only, Production Facilities should only include those items with an asterisk(*) on the Facilities Tab.

SCHOOL SETBACK INFORMATION

Was Notice required under Rule 305.a.(4)? ☐ Yes ☒ No

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.
- Large UMA Facility – 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: Map Unit 193: Valent Loamy sand, 1-15 % Slopes

NRCS Map Unit Name: Map Unit 194: Valent-Bijou loamy sand, 1-12% 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: 3790 Feet

water well: 5280 Feet

Estimated depth to ground water at Oil and Gas Location 21 Feet

Basis for depth to groundwater and sensitive area determination:

Consulted COGCC GIS Maps - DWR Permit #32114

Sensitive Area due to shallow groundwater is unlikely based on the topographic elevation change, depth to groundwater reported at 40 feet in nearby water well with similar topographic change and a surficial clay layer reported at a shallower depth in two water wells within the vicinity of the Location.

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 zone: No

If the location is within a Rule 317B Surface Water Supply Area buffer have all public water supply systems within 15 miles been notified: _____

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 _____

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

| |
|--|
| |
|--|

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

Signed: _____ Date: 12/09/2019 Email: ttritt@mulldrilling.com

Print Name: Tannis Tritt Title: Executive Assistant

Based on the information provided herein, this Oil and Gas Location Assessment complies with COGCC Rules, applicable orders, and SB 19-181 and is hereby approved.

COGCC Approved:  _____ Director of COGCC Date: 1/12/2021

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

| No | BMP/COA Type | Description |
|----|--------------------------------|---|
| 1 | Planning | <p>Mull Drilling Company (MDC) conducts its exploration and production operations in accordance with applicable Federal, State and local regulations.</p> <p>SITE SPECIFIC</p> <p>1. Reporting of the presence of H2S will be done via verbal and email notices. Verbal notice with a follow up email will be provided as soon as practicable upon detection of H2S to COGCC's area engineer and the local government designee.</p> <p>2. Structural practices will be implemented at the site to minimize erosion and sediment transport. Practices may include but are not limited to: straw bales, wattles/sediment control logs, silt fences, earth dikes, drainage swales, sediment traps, subsurface drains, pipe slope drains, inlet protection, outlet protection, gabions, and temporary sediment basins.</p> |
| 2 | General Housekeeping | <p>GENERAL HOUSEKEEPING</p> <p>1. Drilling and production operations conducted in safe, workmanlike manner. Safety expectations include good housekeeping.</p> <p>2. During drilling/completion operations, debris stored in caged container which is removed from the site.</p> <p>3. During production operations, the lease is inspected daily by MDC personnel.</p> |
| 3 | Construction | <p>Soils segregated by type to facilitate reclamation.</p> |
| 4 | Drilling/Completion Operations | <p>COMPLETION OPERATIONS & STRUCTURAL PRACTICES</p> <p>Installation of pipelines in common trenches when practical.</p> <p>Production Facilities will be installed within a Steel containment along with a Synthetic Liner.</p> <p>Utilization of Petropower for real-time monitoring:</p> <p>Dual-level (oil and water differential) ATG's, with rigid stainless-steel rods or flexible PVDF sensors for saltwater tanks or tall stock tanks.</p> <p>Current monitor amperage and notifies you in case of power failure and when power is restored.</p> <p>Temperature monitor for the tank.</p> <p>Murphy pressure monitors at wellhead(s). These will cut off the well (electric motor) in case of either a low or a high pressure.</p> |
| 5 | Drilling/Completion Operations | <p>Should groundwater be encountered in excavation of the reserve pit, steel containment shall be utilized.</p> <p>Evaporation and burial of reserve material: Water-based Bentonitic Drilling Fluid will be utilized. However, we will let fluids evaporate and then test the pit to verify that the location falls below 910-1 COGCC analytical levels before closing the pit.</p> |

Total: 5 comment(s)

Attachment List

| <u>Att Doc Num</u> | <u>Name</u> |
|--------------------|-------------------------|
| 1010958 | NRCS MAP UNIT DESC |
| 1010959 | NRCS MAP UNIT DESC |
| 1010960 | LOCATION DRAWING |
| 1010961 | HYDROLOGY MAP |
| 1010983 | REFERENCE AREA PICTURES |
| 1010984 | REFERENCE AREA MAP |
| 1010985 | SURFACE AGRMT/SURETY |
| 402128473 | FORM 2A RESUBMITTED |
| 402256858 | FORM 2A REJECTED |
| 402257879 | LOCATION PICTURES |
| 402257885 | LOCATION PICTURES |
| 402259004 | ACCESS ROAD MAP |

Total Attach: 12 Files

General Comments

| <u>User Group</u> | <u>Comment</u> | <u>Comment Date</u> |
|-------------------|---|---------------------|
| Final Review | Ready for Final Approval - w/o updated SUA on associated Form 2. | 01/11/2021 |
| OGLA | Final Review - updated SUA attached, Reference area photos and map provided, surface water information amended. Final Review complete and task passed. | 01/08/2021 |
| OGLA | Uploaded Reference Area Map and Reference Area Pictures and revised SUA. | 01/07/2021 |
| OGLA | Changed the distance to the nearest surface water feature to 3790 based on the mapped ephemeral stream as depicted on the USGS Topographic Map. Changed the distance to the nearest water well to 5280 as the nearest water well is over 1 mile from the Location. Updated the surface disturbance. Waiting for concurrence from operator. Sent email requesting clarification of the SUA and updated construction and interim reclamation dates. | 12/22/2020 |
| OGLA | Final Review - does not have reference area map or photos yet rangeland is checked for landuse, SUA has Cheyenne County not Lincoln County, Location drawing size and disturbed area on the 2A do not match, downgradient surface water distance does not appear to correspond to the topographic map distances on COGIS, access road crosses multiple sections not part of the SUA. | 12/22/2020 |
| Permit | Per operator: 1) Checked "Surface owner is mineral owner beneath the location." 2) Checked "Surface owner is committed to an O&G lease" to reflect related Form 2. | 11/04/2020 |
| OGLA | COGCC staff conducted its technical review of this Form 2A Oil and Gas Location Assessment within the context of SB 19-181 and the required Objective Criteria. This Form 2A did not meet any of the Objective Criteria and is compliant with all applicable COGCC rules. | 10/08/2020 |
| OGLA | With Operator concurrence, removed the NRCS Map Unit Description and uploaded the updated NRCS Map Unit Descriptions. | 09/14/2020 |

| | | |
|--------------------|--|------------|
| OGLA | <p>Verify the surface footages.</p> <ul style="list-style-type: none"> - Verified by Operator <p>Per Operator request, removed Hugo as the municipality as the Location lies within undeveloped Lincoln County.</p> <p>Verify where the production facilities will be placed. Distance from the property line to the production facility should not be the same as the distance to the well.</p> <ul style="list-style-type: none"> - Per Operator request, updated the distance from the production facility to the property line to 1114 feet. - Uploaded the modified Location Drawing. <p>Per operator request, added "DWR Permit #32114" to the Basis Statement.</p> <p>Per Operator request, added "Sensitive Area due to shallow groundwater is unlikely based on the topographic elevation change, depth to groundwater reported at 40 feet in nearby water well with similar topographic change and a surficial clay layer reported at a shallower depth than groundwater in two water wells within the vicinity of the Location." to the Basis Statement.</p> <p>Hydrology Map does not show the production facility.</p> <ul style="list-style-type: none"> - With Operator concurrence, removed the superfluous attachments and uploaded the revised Hydrology Map. 10/08/2020 <p>Per Operator request, modified the Drilling and Completions BMPs.</p> <p>Updated the Construction and Interim Reclamation dates.</p> | 09/11/2020 |
| OGLA (Rejected) | <p>OGLA Technical Review:</p> <ol style="list-style-type: none"> 1) Request Operator verify the number and location of drilling pit(s). 2) Verify that the surface owner is also the mineral owner and have Operator concur or check the box. 3) Request Operator verify that the current land use is Non-cropland: Rangeland, and not Improved Pasture. 4) Location Drawing does not have a North Arrow, Scale, Legend, does not show property line or location of drilling pit. 5) Operator indicates that Location is not a Sensitive Area, but that ground water depth is 21 feet w/ sandy soils. Request Operator concurrence that the Location is in a Sensitive Area or revise ground water depth. 6) Request Operator revise BMPs to include "steel ring, synthetic liner to statement on full containment for stock tanks/separators. | 11/14/2019 |
| Permit | Passed Completeness. | 08/06/2019 |

Total: 11 comment(s)