

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:

401386111

Date Received:

09/06/2017

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:

**454760**

Expiration Date:

**04/13/2021**

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: 10051  
 Name: APOLLO OPERATING LLC  
 Address: 1538 WAZEE ST STE 200  
 City: DENVER    State: CO    Zip: 80202

Contact Information

Name: Tanya Lounsberry  
 Phone: (303) 830-0888 x.201  
 Fax: (303) 830-2818  
 email: tlounsberry@apollooperating.com

RECLAMATION FINANCIAL ASSURANCE

- Plugging and Abandonment Bond Surety ID: 20060105     Gas Facility Surety ID: \_\_\_\_\_
- Waste Management Surety ID: \_\_\_\_\_

LOCATION IDENTIFICATION

Name: Green Grass    Number: 11 PAD  
 County: WELD  
 Quarter: SWSW    Section: 11    Township: 5N    Range: 61W    Meridian: 6    Ground Elevation: 4701

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: 600 feet FSL from North or South section line  
800 feet FWL from East or West section line

Latitude: 40.410150    Longitude: -104.182300

PDOP Reading: 1.5    Date of Measurement: 05/24/2017

Instrument Operator's Name: Scott Sherard

## 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>2</u>	Oil Tanks*	<u>6</u>	Condensate Tanks*	<u>    </u>	Water Tanks*	<u>2</u>	Buried Produced Water Vaults*	<u>    </u>
Drilling Pits	<u>    </u>	Production Pits*	<u>    </u>	Special Purpose Pits	<u>    </u>	Multi-Well Pits*	<u>    </u>	Modular Large Volume Tanks	<u>    </u>
Pump Jacks	<u>2</u>	Separators*	<u>2</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>2</u>	Flare*	<u>    </u>	Pigging Station*	<u>    </u>

## OTHER FACILITIES\*

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:

Apollo intends to comply with COGCC rules 1101-1103 for the installation, operation, maintenance, repair, and abandonment therefore utilizing 3"-4" welded steel fusion bond pipe or similar from the wellhead to related facilities.

No major pipelines are planned to be constructed; it is the intent of the operator to connect to existing pipeline infrastructure in the area.

## CONSTRUCTION

Date planned to commence construction: 12/01/2018 Size of disturbed area during construction in acres: 5.70  
Estimated date that interim reclamation will begin: 03/01/2019 Size of location after interim reclamation in acres: 1.00  
Estimated post-construction ground elevation: 4701

## DRILLING PROGRAM

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

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: OFFSITE Drilling Fluids Disposal Method: Commercial Disposal

Cutting Disposal: ONSITE Cuttings Disposal Method: Beneficial reuse

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: Dennis W. Grotheer Trust

Phone: (620) 235-9000

Address: 7700 E. 510th Ave

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

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

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

City: Pittsburg State: KS Zip: 66762

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: 20080044

Date of Rule 306 surface owner consultation 04/20/2017

## 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:	4752 Feet	4502 Feet
Above Ground Utility:	560 Feet	610 Feet
Railroad:	5280 Feet	5280 Feet
Property Line:	600 Feet	650 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 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: 74 Vona Loamy Sand

NRCS Map Unit Name: 72 Vona Loamy Sand

NRCS Map Unit Name: 62 Terry Fine Sand

**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: 05/24/2017

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: 7065 Feet

Estimated depth to ground water at Oil and Gas Location 210 Feet

Basis for depth to groundwater and sensitive area determination:

No visible water feature within 1/2 mile. Distance to nearest water well and estimated depth to ground water was measured from water well Receipt: 3661982, Permit #292812, located in the SESW of Section 15, T5N, R61W.

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:

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

**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: 09/06/2017 Email: tlounsberry@apollooperating.com

Print Name: Tanya Lounsberry Title: Office Manager

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: 4/14/2018

### 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

	In the event contamination is encountered during construction or drilling operations, operations shall cease and all COGCC regulations shall be complied with, including but not limited to, submission of all required Forms.
	Operator shall obtain and submit to the COGCC, Surface Owner Approval for land application activities prior to commencing land application activities of the drill cuttings.

## Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
1	Material Handling and Spill Prevention	Regarding the beneficial reuse of bentonitic drilling cuttings as it relates to the Apollo Operating Green Grass wells Apollo intends to comply with COGCC rule 907d.(3) and the Drill Cuttings Policy for the land application of water based bentonitic drilling fluids as a soil amendment; the appropriate surface owner approvals will be obtained once a local land application site is identified and prior to any land application activity.

Total: 1 comment(s)

## Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
1010342	LOCATION DRAWING
1010343	CULTURAL ITEMS MAP
401386111	FORM 2A SUBMITTED
401386175	MULTI-WELL PLAN
401386176	HYDROLOGY MAP
401386179	LOCATION PICTURES
401386185	ACCESS ROAD MAP
401386187	NRCS MAP UNIT DESC
401386341	NRCS MAP UNIT DESC
401386342	NRCS MAP UNIT DESC

Total Attach: 10 Files

## General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Final Review	ON HOLD - questions in final approval review  Corrected Issues. Pushed back to IN PROCESS - MMH	04/14/2018
Final Review	requested clarification of no closed loop, waste mgmt, operator comment - pushed to ON HOLD  Changed "Closed-Loop" to YES. - MMH Operator is planning to Land Apply Drill Cuttings and has agreed to an additional Condition of Approval stating that appropriate and required Surface Owner Approvals will be obtained prior to Land Application. - Pushed to IN PROCESS - MMH	01/14/2018
Permit	Final Review Completed.	01/12/2018
OGLA	Per Operator request, added the following BMP to the Operator BMP tab.  "Regarding the beneficial reuse of bentonitic drilling cuttings as it relates to the Apollo Operating Green Grass wells Apollo intends to comply with COGCC rule 907d.(3) and the Drill Cuttings Policy for the land application of water based bentonitic drilling fluids as a soil amendment; the appropriate surface owner approvals will be obtained once a local land application site is identified and prior to any land application activity."	01/02/2018
Permit	With operator's concurrence changed Water well sampling required to Rule 318A. Permitting Review Complete.	12/04/2017

OGLA	<p>Location appears to be an Amended Location. Existing well at the Location is a Fritzler Well that is currently Shut In.</p> <ul style="list-style-type: none"> <li>- Working with the Operator - 11/06/2017</li> <li>- Contacted Operator. Waiting on response. - 12/06/2017</li> <li>- Received the following information on 12/27/2017:</li> <li>- "Waiting for well to be abandoned."</li> </ul> <p>Need flowline information. Size, diameter, material, etc.</p> <ul style="list-style-type: none"> <li>- Received and added - 12/28/2017</li> </ul> <p>Need the Beneficial Reuse Plan.</p> <ul style="list-style-type: none"> <li>- Received - 12/28/2017</li> </ul> <p>Cultural Feature distances for the Production Facilities need to be from the actual production facility that is the nearest to each Cultural Feature.</p> <ul style="list-style-type: none"> <li>- Operator submitted amended Location Drawing with Production Facilities and Supplemental Cultural Items Map - Uploaded. Corrected Cultural Features Distances per supplemental information - 01/11/2018</li> </ul> <p>Removed Plant Community as the Location lies on Dry Land Crop Land.</p> <p>Changed the estimated depth to groundwater to 210 feet as reported at the referenced DWR Permit #292812 Water Well.</p>	10/12/2017
LGD	<p>This proposed oil and gas facility is located in the Agricultural Zoned District of unincorporated Weld County. A Weld Oil and Gas Location Assessment (WOGLA) is required prior to constructing any improvements related to oil and gas exploration and production and prior to the issuance of building permits. A building permit is required for the production facilities (tank battery, separators, pump jacks, compressors, generators, etc.) from the Department of Planning Services. Access points from County roads require an Access Permit from the Department of Public Works, which includes any necessary traffic control plans and Improvement Agreements. The use of County right-of-way requires a permit from the Department of Public Works. Troy Swain, Weld Oil/Gas Liaison and LGD (970) 400-3579.</p>	10/10/2017
Permit	<p>Edit: - "Construction, Drilling &amp; Waste" tab: listed "Will a closed loop system be used?" was blank, changed it to "NO" to match the Related APD's Passed Completeness.</p>	09/20/2017
Permit	<p>Returned to draft for:</p> <ul style="list-style-type: none"> <li>- "Facilities" tab: pipelines description is blank</li> <li>- "Surface &amp; Minerals" tab: for "The right to construct..." cannot be "N/A"</li> <li>- "Surface &amp; Minerals" tab: a Bond number is given for "Surface damage assurance...", but "N/A" is selected, this should be changed to "BLANKET"</li> <li>- "Soil &amp; Plant Community" tab: one NRCS Map Unit Name field is filled in, but three NRCS Map Unit Descriptions are attached, these two additional ones should be added or their attachments removed</li> <li>- "Submit" tab: please review Rule 609 c. for requesting a waiver of Rule 609</li> </ul>	09/15/2017

Total: 9 comment(s)