

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:

400996252

(SUBMITTED)

Date Received:

04/04/2016

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: 10359

Name: WARD PETROLEUM CORPORATION

Address: PO BOX 1187

City: ENID State: OK Zip: 73702

Contact Information

Name: Andrea Gross

Phone: (303) 942-0506

Fax: ()

email: agross@upstreampm.com

RECLAMATION FINANCIAL ASSURANCE

☒ Plugging and Abandonment Bond Surety ID: 20100221

☐ Gas Facility Surety ID: _____

☐ Waste Management Surety ID: _____

LOCATION IDENTIFICATION

Name: Sack

Number: 21-4-12HC

County: WELD

QuarterQuarter: SWSW Section: 21 Township: 1N Range: 66W Meridian: 6 Ground Elevation: 4958

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: 742 feet FSL from North or South section line

359 feet FWL from East or West section line

Latitude: 40.031470 Longitude: -104.790180

PDOP Reading: 1.1 Date of Measurement: 02/08/2016

Instrument Operator's Name: Scott Estabrooks

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 | 6 | Oil Tanks* | 18 | Condensate Tanks* | | Water Tanks* | 6 | Buried Produced Water Vaults* | |
| Drilling Pits | | Production Pits* | | Special Purpose Pits | | Multi-Well Pits* | | Modular Large Volume Tanks | |
| Pump Jacks | | Separators* | 6 | Injection Pumps* | | Cavity Pumps* | | Gas Compressors* | 1 |
| Gas or Diesel Motors* | | Electric Motors | | Electric Generators* | | Fuel Tanks* | | LACT Unit* | |
| Dehydrator Units* | | Vapor Recovery Unit* | 6 | VOC Combustor* | | Flare* | | Pigging Station* | |

OTHER FACILITIES*

Other Facility Type

Number

| | |
|-----------------|---|
| Heater Treaters | 6 |
| Meters | 6 |

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:

3" fusion bonded Schedule 40 steel will be used for pipelines and flowlines
1 flowline per well carrying oil, gas, water to separator, which then transfers oil and water to tanks
1 gas line taking separated gas offsite to 3rd party buyer
Potentially: one oil and water commingled line taking oil and water to an offsite facility

CONSTRUCTION

Date planned to commence construction: 07/15/2016

Size of disturbed area during construction in acres: 6.40

Estimated date that interim reclamation will begin: 01/15/2017

Size of location after interim reclamation in acres: 2.40

Estimated post-construction ground elevation: 4962

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? No

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:

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: George A. & Marie Sack

Phone:

Address: 14323 Weld County Road 6

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: Surface Use Agreement

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

Date of Rule 306 surface owner consultation 01/30/2016

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: | <u>637</u> Feet | <u>646</u> Feet |
| Building Unit: | <u>528</u> Feet | <u>619</u> 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

| | | | | |
|-----------------------------------|------|------|------|------|
| High Occupancy Building Unit: | 5280 | Feet | 5280 | Feet |
| Designated Outside Activity Area: | 5280 | Feet | 5280 | Feet |
| Public Road: | 350 | Feet | 501 | Feet |
| Above Ground Utility: | 339 | Feet | 489 | Feet |
| Railroad: | 5280 | Feet | 5280 | Feet |
| Property Line: | 359 | Feet | 509 | Feet |

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.
 - 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: 01/21/2016

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 (onll 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.

The production facilities were placed in the proposed location per surface owner request. The surface owner requested the location to preserve crop land. Any possible locations that would put the facilities outside the 1000' buffer would eliminate significant cropland and income for the surface owner. If other locations were used, a new irrigation system would be required and be extremely costly. Please see the Siting Rationale irrigation map attached.
 Moving the production facilities outside of the 1000' buffer zone would increase the access road length (requiring more surface disturbance) and cause more dust pollution.

Ward was unable to place the production facilities outside of any buffer zone without placing financial burden on the surface owner nor can they place them on land owned by a different surface owner as Ward does not have a relationship with adjacent surface owners.

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: 76 - Vona Sandy Loam , 1 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: 585 Feet

water well: 672 Feet

Estimated depth to ground water at Oil and Gas Location 130 Feet

Basis for depth to groundwater and sensitive area determination:

Depth to groundwater was determined from Water Well Permit #60907 in Sec. 21 T1N R66W.

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

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: 04/04/2016 Email: agross@upstreampm.com

Print Name: Andrea Gross Title: Permit Agent

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

| No | <u>BMP/COA Type</u> | <u>Description</u> |
|----|----------------------|--|
| 1 | Planning | In order to reduce surface disturbance and require multiple well pads, Ward is permitting a multiwell pad. |
| 2 | Traffic control | Traffic Plan: A traffic plan will be done if requested by Weld County. Ward will construct all leasehold roads to accommodate local emergency vehicle access requirements and will be maintained in a reasonable condition. |
| 3 | General Housekeeping | Ward agrees that all trash, refuse pipe, equipment, liquids, chemicals of other materials that are not necessary for the continued operations of the wells will be removed and disposed of no later than 30 days after completion. No such items will be burned or buried on location. |
| 4 | General Housekeeping | All guy line anchors left buried for future use will be identified by a marker of bright color not less than four (4) feet in height and not greater than one (1) foot east of the guy line anchor. |

| | | |
|----|--|--|
| 5 | Material Handling and Spill Prevention | Leak Detection Plan: To ensure protection for the surface during fracturing treatment, the location will be specifically constructed to contain any releases or spills. Secondary containment from any chemical spills or leaks will surround any trucks that carry, mix, or add chemicals to the flow stream as well as connections that could possibly leak fluid. If any spill or release occur, every reasonable step will be taken to quickly remediate the disturbed area. |
| 6 | Material Handling and Spill Prevention | Ward and its contractor's employ best management practices during the drilling and production of its wells and facilities. They will comply with appropriate COGCC and county rules concerning fire and safety. Ward will ensure that any flammable material will remain no less than 25 feet from the wellhead (s), tanks and separator(s). |
| 7 | Material Handling and Spill Prevention | Tanks shall be constructed and maintained in accordance with the National Fire Protection Association Code 30 (2008 version). All tanks will be visually inspected once a day. Recorded inspections will be conducted once a month pursuant to 40 CFR §112. |
| 8 | Material Handling and Spill Prevention | A containment berm or structure will be erected around the oil and water storage tanks. The berm will be inspected regularly and maintained in good condition. |
| 9 | Dust control | Ward will comply with Rule 805.c and take all practicable measures to control fugitive dust caused by the operation, including but not limited to wetting the soil with fresh water via a truck with a spreader bar if deemed necessary. |
| 10 | Construction | Fencing: The wellsite will be fenced if requested by the Surface Owner. |
| 11 | Noise mitigation | A background noise study will be done prior to drilling and the appropriate mitigation measures (if necessary) will be chosen such as a sound wall to meet or exceed COGCC noise requirements. |
| 12 | Odor mitigation | Ward will comply with Rule 805 and Department of Public Health and Environment, Air Quality Control Commission, Regulation No. 2 Odor Emission, 5 C.C.R. 1001-4, Regulation No. 3 (5 C.C.R. 1001-5), and Regulation No. 7 Section XVII.B.1 (a-c) and Section XII. |
| 13 | Drilling/Completion Operations | Closed Loop System will be used for drilling and fluid management. No reserve pit will be used. |
| 14 | Drilling/Completion Operations | BOPE tests will be run upon initial rig-up and at least once every thirty (30) days during drilling operations. Pressure testing of the casing string and each component of the blowout prevention equipment, including flange connections, will be performed to seventy percent (70%) of working pressure or seventy percent (70%) of the internal yield of casing, whichever is less. |
| 15 | Drilling/Completion Operations | One of the first wells drilled on the pad will be logged with open-hole Resistivity Log and Gamma Ray Log from the kick-off point into the surface casing. All wells on the pad will have a cement bond log with gamma-ray run on production casing (or on intermediate casing if production liner is run) into the surface casing. The horizontal portion of every well will be logged with a measured-while-drilling gamma-ray log. The Form 5, Completion Report, for each well on the pad will list all logs run and have those logs attached. The Form 5 for a well without open-hole logs shall clearly state "No open-hole logs were run" and shall clearly identify (by API#, well name & number) the well in which open-hole logs were run. |
| 16 | Drilling/Completion Operations | Light Pollution: Lighting abatement measure will be implemented, including the installation lighting shield devices on all of the more conspicuous lights, low density sodium lighting where practicable; and rig shrouding is no believed necessary as this is an industrial area and the only building unit within 1,000' is owned by Ward. |
| 17 | Final Reclamation | Identification of Plugged and Abandoned Wells:Pursuant to Rule 319.a.(5), once the well has been plugged and abandoned, Ward will identify the location of the wellbore with a permanent monument that will detail the well name and date of plugging. |

| | | |
|----|-------------------|---|
| 18 | Final Reclamation | Well site cleared: Within 90 days subsequent to the time of plugging and abandonment of the entire site, superfluous debris and equipment shall be removed from the site. |
|----|-------------------|---|

Total: 18 comment(s)

Attachment Check List

| <u>Att Doc Num</u> | <u>Name</u> |
|--------------------|---------------------------------------|
| 400996252 | FORM 2A SUBMITTED |
| 400996977 | CONST. LAYOUT DRAWINGS |
| 400996978 | HYDROLOGY MAP |
| 400996979 | LOCATION DRAWING |
| 400996980 | LOCATION PICTURES |
| 400996981 | NRCS MAP UNIT DESC |
| 400996982 | FACILITY LAYOUT DRAWING |
| 400997764 | WASTE MANAGEMENT PLAN |
| 400999471 | RULE 305A CERTIFICATION OF COMPLIANCE |
| 401020923 | ACCESS ROAD MAP |
| 401020927 | SITING RATIONALE |
| 401025894 | MULTI-WELL PLAN |

Total Attach: 12 Files

General Comments

| <u>User Group</u> | <u>Comment</u> | <u>Comment Date</u> |
|-------------------|----------------|---------------------|
| | | |

Total: 0 comment(s)