

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:

400995765

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Date Received:

02/29/2016

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:

446253

Expiration Date:

06/19/2019

☐ 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: Rael Production Facility Number: 27

County: WELD

QuarterQuarter: SWSW Section: 27 Township: 1N Range: 66W Meridian: 6 Ground Elevation: 5051

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: 1195 feet FSL from North or South section line

262 feet FWL from East or West section line

Latitude: 40.018240 Longitude: -104.771770

PDOP Reading: 1.3 Date of Measurement: 02/08/2016

Instrument Operator's Name: Trevor Daley

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 #

Production Facilities Location serves Well(s)

400995109

FACILITIES

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

| | | | | | | |
|-----------------------|----------------------|---|----------------------|------------------|---|-------------------------------|
| Wells | Oil Tanks* | 3 | Condensate Tanks* | Water Tanks* | 1 | Buried Produced Water Vaults* |
| Drilling Pits | Production Pits* | | Special Purpose Pits | Multi-Well Pits* | | Modular Large Volume Tanks |
| Pump Jacks | Separators* | 1 | Injection Pumps* | Cavity Pumps* | | Gas Compressors* |
| Gas or Diesel Motors* | Electric Motors | | Electric Generators* | Fuel Tanks* | | LACT Unit* |
| Dehydrator Units* | Vapor Recovery Unit* | 1 | VOC Combustor* | Flare* | | Pigging Station* |

OTHER FACILITIES*

Other Facility Type

Number

| | |
|----------------|---|
| Heater Treater | 1 |
| ECD | 1 |

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
1 flowline carrying oil, gas, water to separator on offsite production facility (located to North)
1 gas line taking separated gas offsite to 3rd party buyer
Oil and water to be trucked offsite

CONSTRUCTION

Date planned to commence construction: 06/01/2016

Size of disturbed area during construction in acres: 2.80

Estimated date that interim reclamation will begin: 12/16/2016

Size of location after interim reclamation in acres: 1.50

Estimated post-construction ground elevation: 5048

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: _____

Drilling Fluids Disposal Method: _____

Cutting Disposal: _____

Cuttings Disposal Method: _____

Other Disposal Description:

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: Tom Gray Elk Rael

Phone: 303-659-2777

Address: 15147 County Road 4

Fax: _____

Address: _____

Email: 80603

City: Brighton State: CO Zip: 80603

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: No

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 04/21/2014

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: | _____ Feet | 1009 Feet |
| Building Unit: | _____ Feet | 1009 Feet |
| High Occupancy Building Unit: | _____ Feet | 5280 Feet |
| Designated Outside Activity Area: | _____ Feet | 5280 Feet |
| Public Road: | _____ Feet | 121 Feet |
| Above Ground Utility: | _____ Feet | 98 Feet |
| Railroad: | _____ Feet | 5280 Feet |
| Property Line: | _____ Feet | 132 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 (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.

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: 70 Valent Sand; 3 to 9 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: Prairie sandreed, Switchgrass, Sand bluestem, Sand sagebrush, Sideoats grama, Little bluestem, Needleandthread, Western wheatgrass, Blue grama, Sand dropseed, Yucca, Sedge, Plains prickly pear

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: 2354 Feet

water well: 666 Feet

Estimated depth to ground water at Oil and Gas Location 42 Feet

Basis for depth to groundwater and sensitive area determination:

Depth to groundwater determined from permit 16024F approx 3,000 ft SW 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 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 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 Reference area photos will be taken in the growing season and submitted at a later date. There are no wells on this location. Per a phone conversation with COGCC the Form 2 that these production facilities will serve was removed from the Related Forms tab per COGCC request.

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

Signed: _____ Date: 02/29/2016 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: Matthew Lee Director of COGCC Date: 6/20/2016

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

| | |
|--|---|
| | Once construction is complete, the Operator will submit a survey drawing via Form 4 Sundry with distances from the nearest production equipment to the nearest building unit to show production equipment is no less than the distances on the Form 2A. |
|--|---|

Best Management Practices

No BMP/COA Type

Description

| | | |
|---|-----------------|---|
| 1 | Planning | Visual Mitigation: Pursuant to Rule 804, the tank battery shall be painted in uniform, non-contrasting, non-reflective color tones with the colors matched to but slightly darker than the surrounding landscape. |
| 2 | Traffic control | Traffic: Weld County requires an Access Permit. Per Weld County, a Traffic Control Plan is provided by the county. Per Weld County regulations, vehicles or construction equipment will not be parked in the travel way and should be moved to the shoulder. No traffic obstructions will be done at night. The access permit is being prepared and will be obtained prior to any construction. Ward will comply with all Weld County conditions of approval. An 8" x 30" culvert will be installed. Ward will utilize truckers with larger hauling capacity to minimize traffic impacts. |

| | | |
|----|--|--|
| 3 | Traffic control | Ward will construct all leasehold road to accommodate local emergency vehicle access requirements and will be maintained in a reasonable condition. |
| 4 | General Housekeeping | Guy Line Anchors: All guy line anchors left buried for future use will be identified by a marker of bright color not less than four feet in height and not greater than one foot east of the guy line anchor. |
| 5 | General Housekeeping | Removal of Surface Trash: 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. |
| 6 | Storm Water/Erosion Control | Site Specific Measures: Ward will maintain a Stormwater Management Plan with site specific measurements to assess erosion control. |
| 7 | Material Handling and Spill Prevention | <p>Leak Detection Plan: To ensure protection for the surface during fracturing treatment, the location will be specifically constructed to contain any releases or spills. A steel containment berm or structure will be used for secondary containment. They will have a capacity of 110% or greater of the largest tank plus largest annual rainfall. 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. Should any spill or release occur, every reasonable step will be taken to quickly remediate the area disturbed. Ward will utilize tank level indicators with an alarming system, and remote shut in capability. Tanks will alarm if the float reads above set threshold. Well can be shut in remotely or tank can be sold or moved to another tank.</p> <p>One to seven audio, visual, olfactory inspections per week will be recorded and kept in the district office and available to COGCC upon request. Ward has implemented a Leak Detection and Repair (LDAR) program in accordance with the schedule set forth in Regulation 7 Section XVII.F.4. for all facilities. Records will be kept electronically indefinitely. Ward will also abide by EPA mandated SPCC rules to ensure proper fluid containment.</p> <p>During transfers Oil and water load lines will have drip pots.</p> <p>Ward has a Flowline Integrity Program in place. Lines are either to be welded or threaded, some lines may be non-metallic. Welded Flowlines will be installed with welded or flanged connections. All threaded metallic pipe will be joined with appropriate lubricant/sealant. All non-metallic pipes that require welded joints will be installed with appropriate equipment to meet manufacturer recommendations and welded with qualified welders. All buried non-metal Flowline installation will contain a continuous metallic tracer line attached to the pipeline with surface access or other means of surface location. All flowlines will be pressure tested to their maximum manufactured value (at minimum 80%) prior to hydrocarbon production use. 10% of welds will be x-rayed for integrity. Chemical inspection program begins as soon as well begins flowback. Ward will perform yearly flowline inspections to ensure flowline integrity and prevent leaks/spills. Records of inspections will be available to COGCC upon request.</p> |
| 8 | Material Handling and Spill Prevention | Control of Fire Hazards: 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 any 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). |
| 9 | Material Handling and Spill Prevention | Berming: A steel containment berm or structure will be erected around the oil and water storage tanks. The berm will be inspected at least every 14 calendar days while the site is under construction and within 24 hours of a precipitation event. Inspection records will be kept on file for a minimum of five (5) years (per COGCC Rule 205.f) from expiration or inactivation of permit coverage. These records will be made available to the COGCC upon request. One to seven audio, visual, olfactory inspections per week will be recorded and kept in the district office and available to COGCC upon request. During production phase, berm will be inspected at least every 14 calendar days and within 24 hours of a precipitation event. |
| 10 | Material Handling and Spill Prevention | Tank specifications: 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 for issues. Recorded inspections will be conducted once a month pursuant to 40 CFR §112. |
| 11 | Construction | Fencing: The wellsite will be fenced if requested by the Surface Owner. |

| | | |
|----|-------------------|--|
| 12 | Odor mitigation | Operator 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. |
| 13 | Odor mitigation | Odor Mitigation: In compliance 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, Ward will utilize a VRU to reduce odor emissions during production. |
| 14 | 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: 14 comment(s)

Attachment Check List

| <u>Att Doc Num</u> | <u>Name</u> |
|---------------------------|------------------------|
| 400995765 | FORM 2A SUBMITTED |
| 400996814 | CONST. LAYOUT DRAWINGS |
| 400996815 | HYDROLOGY MAP |
| 400996816 | LOCATION DRAWING |
| 400996819 | LOCATION PICTURES |
| 400996820 | NRCS MAP UNIT DESC |
| 400996821 | REFERENCE AREA MAP |
| 400997300 | ACCESS ROAD MAP |
| 400998973 | SURFACE AGRMT/SURETY |

Total Attach: 9 Files

General Comments

| <u>User Group</u> | <u>Comment</u> | <u>Comment Date</u> |
|-------------------|--|--------------------------|
| Permit | Final Review Completed. | 6/17/2016 1:33:00 PM |
| OGLA | Resolved well pad conditions associated with production. OGLA task passed. | 6/17/2016 1:25:08 PM |
| OGLA | emails regarding BMPs and sales line between OGCC and Operator. Sales line tie in not resolved. - move to HOLD | 6/15/2016 10:04:02 AM |
| Permit | Removed check from "This location assessment is included as a part of a permit application. No wells on this pad. Permitting Review Complete. | 5/26/2016 2:58:19 PM |
| OGLA | Public comment from LGD. Production is outside the buffer zone. | 5/24/2016 10:44:56 AM |
| OGLA | Email with Operator regarding size of facilities to related well pad. Operator has only submitted 1 form 2 for the 8 well location. Operator understands an amended 2A will be needed to expand the facility to accommodate all 8 wells. Also agrees to COA for post construction survey. | 5/16/2016 12:05:04 PM |
| OGLA | Operator responded to questions via email. Updated distance to nearest building to be the same as building unit as being the closest and updated depth to water. Public comments are from the LGD stating no contact from citizens, Operator will need to obtain the proper permits through the county for the location. | 4/1/2016 3:37:43 PM |
| LGD | <p>This proposed oil and gas facility is located in unincorporated Weld County. As of today's date, March 22, 2016, the Weld County Oil and Gas Liaison/LGD has not been contacted by any nearby resident(s) or local government(s) regarding this proposed location. The County will respond to any legitimate concerns or issues regarding a proposed location and attempt to facilitate a solution with the operator. Oil and Gas Exploration and Production activities are currently considered a Use by Right in the Agricultural Zoned District and no land use permitting is required by the County. A building permit is required for the production facilities (tank battery, separators, pump jacks, etc.) from the Department of Planning Services. A new or expanded access from a county road or the use of a right-of-way requires a permit from the Department of Public Works. Troy Swain, Weld Oil and Gas Liaison and LGD (970) 353-6100, ext. 3579.</p> | 3/22/2016 10:18:36 AM |
| OGLA | Sent Operator an email regarding cultural distances and DTW in water resources. | 3/11/2016 4:17:52 PM |
| Permit | Passed completeness. | 3/2/2016 3:29:24 PM |
| Permit | Returned to draft: Since you have a well listed on the related forms tab, you must have one listed on the facilities tab. On the pipeline description, is that for gas oil or water - please specify. Please fill out drilling and waste management program - since you have one well. Please fill out cultural distance from well, since you will have a well. (If however, you really won't have a well on this location, then please take it off of the related forms tab.) Reference area pictures do not conform to guidance - taken out of growing season. SUA needs to be signed by operator as well. | 3/2/2016 8:05:43 AM |

Total: 11 comment(s)