

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:

401051216

(SUBMITTED)

Date Received:

05/26/2016

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: 10459
 Name: EXTRACTION OIL & GAS LLC
 Address: 370 17TH STREET SUITE 5300
 City: DENVER State: CO Zip: 80202

Contact Information

Name: Alyssa Andrews
 Phone: (720) 481-2379
 Fax: ()
 email: aandrews@extractionog.com

RECLAMATION FINANCIAL ASSURANCE

- Plugging and Abandonment Bond Surety ID: 20130028 Gas Facility Surety ID: _____
 Waste Management Surety ID: _____

LOCATION IDENTIFICATION

Name: Vetting Facility Number: _____
 County: WELD
 Quarter: SENE Section: 15 Township: 5N Range: 65W Meridian: 6 Ground Elevation: 4648

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: 1667 feet FNL from North or South section line
1794 feet FWL from East or West section line

Latitude: 40.401930 Longitude: -104.652439

PDOP Reading: 1.6 Date of Measurement: 11/30/2015

Instrument Operator's Name: C. Westholmes

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) _____ 400940497 _____

FACILITIES

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

Wells _____ Oil Tanks* 18 Condensate Tanks* _____ Water Tanks* 4 Buried Produced Water Vaults* _____
 Drilling Pits _____ Production Pits* _____ Special Purpose Pits _____ Multi-Well Pits* _____ Modular Large Volume Tanks _____
 Pump Jacks _____ Separators* 24 Injection Pumps* _____ Cavity Pumps* _____ Gas Compressors* _____
 Gas or Diesel Motors* _____ Electric Motors _____ Electric Generators* _____ Fuel Tanks* _____ LACT Unit* 1
 Dehydrator Units* _____ Vapor Recovery Unit* 4 VOC Combustor* _____ Flare* _____ Pigging Station* _____

OTHER FACILITIES*

Other Facility Type **Number**

Other Facility Type	Number
ECD	6
Maintenance Tank	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:

Operator will trench flowlines in one piping corridor that runs between the drill pad and the separator pad and be placed at 12" centers. These lines will most likely be 2" or 3" fusion bonded SCH160 steel pipe and have proper cathodic protection throughout the run. Extraction will then sweep up with a long radius that will tie off each line to the appropriate separator. All welds on these are 100% x-ray and hydro tested to the API and Manufactures specs for a class 1500 series flange. Also meets ASME code B31.4.

CONSTRUCTION

Date planned to commence construction: 10/01/2016 Size of disturbed area during construction in acres: 6.00
 Estimated date that interim reclamation will begin: 04/01/2017 Size of location after interim reclamation in acres: 3.10
 Estimated post-construction ground elevation: 4648

DRILLING PROGRAM

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

Is H₂S anticipated? _____

Will salt sections be encountered during drilling: _____

Will salt based mud (>15,000 ppm Cl) be used? _____

Will oil based drilling fluids be used? _____

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? _____

Reuse Facility ID: _____ or Document Number: _____

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

SURFACE & MINERALS & RIGHT TO CONSTRUCT

Name: 7N LLC

Phone: _____

Address: 370 17th st, Suite 5300

Fax: _____

Address: _____

Email: _____

City: Denver State: CO Zip: 80202

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: applicant is owner

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

Date of Rule 306 surface owner consultation _____

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	567 Feet
Building Unit:	_____ Feet	771 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:	_____	Feet	1364	Feet
Designated Outside Activity Area:	_____	Feet	5280	Feet
Public Road:	_____	Feet	1022	Feet
Above Ground Utility:	_____	Feet	1108	Feet
Railroad:	_____	Feet	5280	Feet
Property Line:	_____	Feet	156	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: 10/08/2015

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 (onl 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.

Site Rationale – Vetting Facility:
 The facility for the Vetting 15-H well pad has been positioned to meet COGCC setbacks from both Building Units and High Occupancy Building Units. The facility is located over 1,300 feet from the closest high occupancy building unit and over 700' from the two closest building units. Additionally the facility has been located to achieve the greatest setback possible from the limits of the school property located to the northwest, yet as far as possible from the residential homes located to the south and east. The facility has been designed to use the least amount of equipment yet maintain safe operations and will employ numerous best management practices to minimize impacts to surrounding land owners, including use of a lease automatic custody transfer (LACT) meter to load trucks on this location. The LACT meter has many advantages over traditional truck loading including:
 PLEASE SEE THE COMPLETE SITE RATIONALE ATTACHED AS 'OTHER'.

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: 1—Altvan loam, 0 to 1 percent slopes
 NRCS Map Unit Name: 2—Altvan loam, 1 to 3 percent 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: 36 Feet

water well: 1020 Feet

Estimated depth to ground water at Oil and Gas Location 25 Feet

Basis for depth to groundwater and sensitive area determination:

Downgradient surface water feature: Ditch 36' SE
Water well: 12705-R - 1020' W

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 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 This production facility will serve wells on the Vetting location (Form 2A Doc #400940497).

The surface owner, 7N LLC (An Extraction company), leased the property to Richmark Real Estate Partners. Richmark then entered into a surface use agreement with Extraction. The SUA grants Extraction an irrevocable, exclusive easement to use the surface of the Property to conduct oil and gas operations. Please see the attached Ground Lease and Option to Purchase (attached as 'Other') and the SUA.

Extraction is working through the Weld County Use by Special Review process currently and will make every effort to keep the disturbed area between the USR and COGCC applications consistent. The USR application is an iterative process but Extraction will display and label the Disturbed Area associated with the COGCC Oil and Gas Location on all materials submitted for the USR from this point forward.

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

Signed: _____ Date: 05/26/2016 Email: aandrews@extractionog.com

Print Name: Alyssa Andrews Title: Regulatory Analyst

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.

<u>COA Type</u>	<u>Description</u>

Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
1	Planning	604.c(2)M. Fencing: A meeting with the surface owner will determine a fencing plan. The location will be adequately fenced to restrict access by unauthorized persons. Fencing will be installed per the USR plans with Weld County.
2	Planning	This location is subject to Use by Special Review approval from Weld County. Operator is currently working through the USR application with Weld County staff. Operator will host a neighborhood meeting prior to public hearings.
3	Planning	604.c.(2)N. Control of fire hazards: All material that is considered a fire hazard shall be a minimum of 25' from the wellhead tanks or separators. Electrical equipment shall comply with API IRP 500 and will comply with the current national electrical code.

4	Planning	Per the landscaping and screening plan submitted with the Weld County USR application, the surface owner of the property will install screening around the perimeter of the property. Screening shall include a solid wood fence along the west, north, and a portion of the south sides of the property. In conjunction with the wood fence, trees will be installed outside of the fence.
5	Traffic control	604.c.(2)S. Access Roads: The access road will be constructed to accommodate local emergency vehicles. This road will be maintained for access at all times. Traffic will be routed to minimize local interruption. During construction and through the life of this location, Operator will utilize watering, via water trucks, to control fugitive dust. Additionally, the access road will be constructed with aggregate road base material and vehicle speeds will be limited to ten miles per hour to reduce dust.
6	Traffic control	A traffic impact study (TIS) was not required as part of the Weld County USR application, but a traffic narrative was submitted. Per the narrative, the operator is committed to using a local water source or temporary pipeline to deliver water to location for completion operations in an effort to reduce truck traffic. Additionally the operator agreed to use the following haul route: From the access road, all traffic will travel south on Cherry Avenue (County Road 43) and turn east onto 24th Street. From 24th Street traffic will turn south onto U.S. Highway Business 34. From U.S. Highway Business 34 traffic will either head east or west on U.S. Highway 34 depending on their final destination. This same haul route will also be used to access the location. This haul route will be provided to all operator personnel and contractors working on location.
7	General Housekeeping	804. Visual Impacts: All long term facility structures will be painted a color that enables the facilities to blend in with the natural background color of the landscape, as seen from a viewing distance and location typically used by the public
8	General Housekeeping	Maintain appearance with garbage clean-up; a trash bin will be located on site to accumulate waste by the personnel drilling the wells. Site will have unused equipment, trash and junk removed immediately.
9	General Housekeeping	604.c.(2)P. Trash Removal: All trash, debris and material not intrinsic to the operation of the oil and gas facility shall be removed and legally disposed of as applicable.
10	Storm Water/Erosion Control	Implement and maintain BMPs to control stormwater runoff in a manner that minimizes erosion, transport of sediment offsite, and site degradation. Co-locate gas and water gathering lines whenever feasible, and mitigate any erosion problems that arise due to the construction of any pipeline(s). Location will be covered under Extraction Oil & Gas's field wide permit, permit number COR03M013.
11	Material Handling and Spill Prevention	604.c.(2)F. Leak Detention Plan: Operator will monitor production facilities on a regular schedule to identify fluid leaks, including, but not limited to, visually inspecting all wellheads, tanks and fittings. Additionally annual SPCC inspections will be conducted and documented. Annual flowline testing will also occur according to COGCC rules 1101 and 1102.
12	Material Handling and Spill Prevention	604.c.(2)R Tank Specifications: Tanks will be designed, constructed and maintained in accordance with NFPA Code 30 (2008 version). All tanks are visually inspected by operator on a regular schedule and annual SPCC inspections will be conducted and documented.
13	Dust control	805.c. Operator shall employ practices for control of fugitive dust caused by their operations. Such practices shall include but are not limited to the use of speed restrictions, regular road maintenance, restriction of construction activity during high-wind days, and silica dust controls when handling sand used in hydraulic fracturing operations. Additional management practices such as road surfacing, wind breaks and barriers may be used.
14	Construction	Permanent lighting will be installed around the facility to allow both the operator and haulers to conduct safe operations at night. All lights will be directed down toward the location or shielded so no light pollution leaves the facility.
15	Construction	604.c.(3)B. Berm Construction. Tank berms shall be constructed of steel rings with a synthetic or engineered liner and designed to contain 150% of the capacity of the largest tank. All berms will be visually checked periodically to ensure proper working condition. Secondary containment devices shall be sufficiently impervious to contain any spilled or released material. Tertiary containment, such as an earthen berm, will be installed around production facilities. All berms will be visually checked periodically to ensure proper working condition.

16	Construction	604.c.(2)A. If necessary, sound walls and/or hay bales will installed around production equipment.
17	Noise mitigation	Baseline noise monitoring and testing will be conducted prior to commencement of pad construction.
18	Noise mitigation	Operator will use electricity to power the facilities in order to decrease the amount of noise from combustion generators and/or engines.
19	Noise mitigation	If needed, sound mitigation panels will be installed around the vapor recovery units and/or combustion motors during production operations to shield sensitive areas.
20	Emissions mitigation	Operator will tie into an existing 16-inch DCP gas sales line that will be extended to the location. Extraction will send salable quality gas immediately down the sales line.
21	Emissions mitigation	604.c.(2)C.iii. Green Completions - Emission Control System. Flowback gas shall be thermally oxidized in an emissions control device (ECD), which will be installed and kept in operable condition for at least the first 90-days of production pursuant to CDPHE rules. This ECD shall have an adequate capacity for 1.5 times the largest flowback within a 10 mile radius, will be flanged to route gas to other or permanent oxidizing equipment and shall be provided with the equipment needed to maintain combustions where non-combustible gases are present.
22	Odor mitigation	805. Operator will use electricity to power the facilities in order to eliminate odors associated with combustion generators and/or engines.
23	Interim Reclamation	Operator shall be responsible for segregating the topsoil, backfilling, re-compacting, reseeding, and re-contouring the surface of any disturbed area so as not to interfere with Owner's operations and shall reclaim such area to be returned to pre-existing conditions as best as possible with control of all noxious weeds.
24	Final Reclamation	604.c.(2)T. 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. Identification of plugged and abandoned wells will be identified pursuant to 319.a.(5)

Total: 24 comment(s)

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
401051216	FORM 2A SUBMITTED
401051240	NRCS MAP UNIT DESC
401051241	NRCS MAP UNIT DESC
401051255	ACCESS ROAD MAP
401051256	FACILITY LAYOUT DRAWING
401051258	HYDROLOGY MAP
401051259	LOCATION DRAWING
401051261	OTHER
401051350	OTHER
401052186	LOCATION PICTURES
401052187	OTHER
401052188	SITING RATIONALE
401052190	SURFACE AGRMT/SURETY
401052191	WASTE MANAGEMENT PLAN
401058523	OTHER
401058524	OTHER

Total Attach: 16 Files

General Comments

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

Total: 0 comment(s)