

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:

401040773

(SUBMITTED)

Date Received:

06/30/2016

Oil and Gas Location Assessment

New Location Refile Amend Existing Location Location#: 436824

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:

436824

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: Triple Creek Number: _____
 County: WELD
 Quarter: SENE Section: 8 Township: 5N Range: 66W Meridian: 6 Ground Elevation: 4789

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: 2622 feet FNL from North or South section line
1191 feet FEL from East or West section line
 Latitude: 40.414200 Longitude: -104.798670
 PDOP Reading: 0.7 Date of Measurement: 11/22/2013
 Instrument Operator's Name: C. WESTHOLMES

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: RICHMARK REAL ESTATE Phone:

Address: 5200 W 20TH ST Fax:

Address: Email:

City: GREELEY State: CO Zip: 80634

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

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>841</u> Feet	<u>899</u> Feet
Building Unit:	<u>1001</u> Feet	<u>1012</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:	<u>2499</u> Feet	<u>2576</u> Feet
Designated Outside Activity Area:	<u>5280</u> Feet	<u>5280</u> Feet
Public Road:	<u>1178</u> Feet	<u>1289</u> Feet
Above Ground Utility:	<u>1218</u> Feet	<u>1332</u> Feet
Railroad:	<u>5280</u> Feet	<u>5280</u> Feet
Property Line:	<u>397</u> Feet	<u>104</u> 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
- Does the UMA Facility meet the definition of a Large UMA Facility Yes No

- 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: 05/21/2014
Date of Rule 305.a.(2) Buffer Zone Notification to Building Unit Owners: _____

Pre-application Notifications (required if location is a Large UMA Facility)

Date of Rule 305A.a.(1)A Notice of intent to construct a Large UMA Facility to Local Government: 05/21/2014
Date of Rule 305A.a.(1)B Notice of intent to construct a Large UMA Facility to Surface Owner: 05/21/2014
Date of Rule 305.a.(3) Large UMA Facility Notice to Proximate Local Governments: 05/21/2014

Large UMA Facility Form 2A Process Initiation (check all that apply)

- Rule 305A.f.(1)A. Local Government and Operator have reached agreement regarding the siting of the Large UMA Facility (attach certification of Rule 305A compliance)
- Rule 305A.f.(1)B. Rule 305A.e exception claimed (if checked then a 305A exception must be checked on the Exceptions Tab)
- Rule 305A.f.(1)C. Local Government waived 305A procedures for this proposed location (attach waiver as evidence of Rule 305A compliance)
- Rule 305A.f.(1)D. The Local Government did not respond in writing within 30 days of receiving the notice of intent to construct (attach certification of Rule 305A compliance)
- Rule 305A.f.(1)E. The Local Government and Operator have engaged in consultation pursuant to Rule 305A.c. but have not reached agreement within 90 days of the 305A.a.(1)A. notice of intent to construct
- Rule 303.c.(1). Form 2A submittal is consistent with a Rule 216.f.(3) Comprehensive Drilling Plan or a Local Government comprehensive plan that specifies locations for oil and gas facilities. (attach Rule 303.c.(1) supporting documentation)

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.

Please see siting rationale for the Triple Creek Location attached as "Siting Rationale".

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: 51 - Otero sandy loam, 1 to 3 percent slopes

NRCS Map Unit Name: 53 - Otero sandy loam, 5 to 9 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: 244 Feet

water well: 1150 Feet

Estimated depth to ground water at Oil and Gas Location 17 Feet

Basis for depth to groundwater and sensitive area determination:

Distance to surface water feature is 244' NW to the Sheep Draw
Distance to groundwater determined from static water level of nearby water well, receipt #9065245, Permit #70935- -

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)

LARGE UMA FACILITY EXCEPTIONS

- 305A.e.(1)A. Local Government has currently opted out of Rule 305A notification and consultation processes
- 305A.e.(1)B. Pre-existing agreement with Local Government (attach copy of relevant provisions to 2A per Rule 303.b.(3)K).
- 305A.e.(1)C. Approved site specific development plan (attach copy of relevant portions of the plan and approval by the Local Government to Form 2A per Rule 303.b.(3)K)
- 305A.e.(1)D. Large UMA Facility is within an oil and gas operations area (attach copy of relevant portions of the plan and approval by the Local Government to Form 2A per Rule 303.b.(3)K).

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	<p>Public Notice was a part of the City of Greeley Use by Special Review process. Two neighborhood meetings were held prior to the public hearings. This project was heard at the December 8, 2015 and the January 5, 2016 City of Greeley Planning Commission hearings and at City of Greeley City Council on March 8, 2016.</p> <p>Rule 305A.a.(1)A: 05/21/2014 was the date Extraction submitted the USR application to the City of Greeley, serving as a notice to the local government. The USR application was approved by Greeley City Council on 3/8/2016 and the final USR plans were signed by City staff on 6/14/2016.</p> <p>Rule 305A.a.(1)B: The USR application submittal date was also used as the notice to the Surface owner. The surface owner was involved in the USR submittal process, received copies of all submitted materials, and attended all public hearings as well as meetings with City Staff. The surface owner is a partner company with Extraction Oil & Gas.</p> <p>Rule 305.a.(3): The USR application submittal date is used again since the City of Greeley is the only local government within 1000' of the proposed Triple Creek site. Through the USR application process, City of Greeley staff is aware that the Triple Creek location is being amended to a LUMA location to reconcile the approved USR plans with the Oil and Gas Location Assessment.</p> <p>No Building Units were within 1000' of production facilities or wells, therefore no Buffer Zone notices were sent as per Rule 305.a.(2). Please see the attached Notification Zone Drawing attached as "Other".</p> <p>There are 32 Building Units within 1000' of the disturbed area of the location, and this pad has 22 wells proposed, therefore this location is a Large UMA. Please see the attached UMA Determination map attached as "Other".</p> <p>Extraction submits the following attached as "Rule 303.b.(3)K. Compliance Documentation": (1) a copy of the signed minutes whereby the City of Greeley City Council approved Extraction's Use-By-Special-Review application, subject to conditions; (2) Triple Creek Directional Project, USR 6:14 – Approved Site and Construction Drawings; and (3) the Triple Creek Directional Project, USR 6:14 – Roadway and Water Infrastructure Agreement ("Development Agreement").</p> <p>Please find a statement from the City of Greeley attached as "Other"</p>
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I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct and complete.

Signed: _____ Date: 06/30/2016 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	This location has an approved Use by Special Review (USR 6:14) permit from the City of Greeley. Refer to the USR plan set for detail.

2	Planning	Landscape and screening plan was approved as part of the approved Use by Special Review (USR 6:14) permit from the City of Greeley. Generally, screening shall consist of earthen berms along the east, south, and west sides of the pad. Landscaping consisting of trees and shrubs will be installed along the north and west sides of the pad. Refer to landscape plans within the USR plan set.
3	Planning	604.c(2)M. Fencing: The location will be adequately fenced to restrict access by unauthorized persons. Fencing will be installed around facilities and wellheads. Additional perimeter fencing will be installed along the north and west sides of the location per approved landscape plans. Fence shall be six (6) feet in height, of noncombustible material, and will include a gate that shall be locked.
4	Planning	Access to the property will be controlled by a motorized gate operated by a key pad.
5	Planning	604.c.(2)J.i Blowout Prevention Equipment ("BOPE"): A double ram and annular preventer will be used during drilling. Stabbing valves shall be installed in the event of reverse circulation and shall be prior tested with low and high pressure fluid.
6	Planning	604.c.(2)J.ii Backup stabbing valves will be required on well servicing operations during reverse circulation. Valves shall be pressure tested before each well servicing operation using both low-pressure air and high-pressure fluid.
7	Planning	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	Planning	604.c.(2)N. Any material not in use that might constitute a fire hazard shall be removed a minimum of twenty-five (25) feet from the wellhead, tanks and separator. Any electrical equipment installations inside the bermed area shall comply with API RP 500 classifications and comply with the current national electrical code as adopted by the State of Colorado.
9	Planning	All operations shall comply with Federal, State, and Local Laws including applicable standards included in 18.56 Oil & Gas Operations of the Greeley Development code.
10	Planning	The operator has developed an emergency response and fire protection plan specific to this site.
11	Planning	All tanks on site must be no taller than 12.5 feet.
12	Community Outreach and Notification	A sign with Extraction's contact information and a 24-hour contact number will be placed at or near the access road entrance.
13	Community Outreach and Notification	Public Notice was a part of the City of Greeley Use by Special Review process. Two neighborhood meetings were held prior to the public hearings. This project was heard at the December 8, 2015 and the January 5, 2016 City of Greeley Planning Commission hearings and at City of Greeley City Council on March 8, 2016.
14	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 15 miles per hour to reduce dust.
15	Traffic control	604.c.(2)D: A Traffic Impact Study (TIS) was completed and approved as part of the Use by Special Review permit. The proposed haul route and overweight haul route for construction, drilling, completion, and production traffic was designated. Virtually all construction and permanent truck traffic will be directed to arrive and depart the site from the north on 71st Avenue to minimize delay for other vehicles on 71st Avenue. There will be approximately 30 random truck trips to the site to deliver earthwork equipment and the drilling rig that could exceed the existing weight restrictions of the bridge over the Sheep Draw. These trucks must use the U.S. 34 By-Pass and 71st Avenue to the south and will be directed to avoid street and school peak hours. All other site traffic is expected to arrive and depart using 71st Avenue equally to the north and south.
16	Traffic control	Water will not be trucked to the location for completion operations.
17	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. No drilling waste (cuttings, etc.) may be stored or kept on the site.

18	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.
19	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). An Erosion and Sediment Control Plan was submitted as part of the Use By Special Review process with the City of Greeley and will be covered under Extraction Oil & Gas's field wide permit, permit number COR03M013.
20	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. Inspection and record retention of tank inspections will be in accordance per SPCC regulation. All records will be made available to the COGCC upon to request.
21	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. Inspection and record retention of flowline testing will be in accordance per COGCC regulation. All records will be made available to the COGCC upon to request.
22	Material Handling and Spill Prevention	604.c.(4)B.ii. 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. Extraction will conduct yearly pressure tests of all flowlines to ensure the integrity of each flowline on the location. Extraction will monitor pressures on either end of the flowline: wellhead and separator. This monitoring will ensure early detection of any leaks in the flowline.
23	Dust control	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.
24	Dust control	604.c.(4)B.vi. Proppant dust control. Silica dust from sand used during hydraulic fracturing will be minimized through use of "Sandbox" proppant delivery process, or equivalent system. If necessary, silica dust will be contained using a dust suppression vacuum system.
25	Construction	604.c.(2).Q. All guy line anchors left buried for future use shall 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.
26	Construction	604.c.(2).E. This will be a multi-well pad, located in a manner which allows for the greatest distances possible from building units.
27	Construction	803 Light sources during all phases of operations will be directed downwards and away from occupied structures where possible. Lighting shield devices will be installed on all of the more conspicuous lights and the rig floor will be shrouded. A lighting plan was completed and approved as part of the Use by Special Review permit and must comply with the City of Greeley's lighting standards, Section 18.40.110 of the Development Code.
28	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
29	Construction	Operational system will be automated to allow remote shut in, remote monitoring, and off-site response to emergencies.

30	Construction	604.c.(3)i. An engineered containment system will be constructed around the tank battery. The containment system will be constructed of a perimeter of metal walls that are post driven into the ground around a flexible geotextile base.
31	Construction	604.c.(3)ii. The interior of the containment system will be sprayed with a polyurea liner technology. This liner technology maintains impermeability and puncture resistance under exposure to UV rays, weather extremes, and chemicals commonly encountered in oil and natural gas production, and provides seamless protection.
32	Noise mitigation	802. 32 foot tall sound walls will be installed around the perimeter of the location during drilling and completion operations in accordance with the approved Use by Special Review permit.
33	Noise mitigation	The operation must comply with the City of Greeley's Noise Regulations, in accordance with Title 9, Article II of the City of Greeley's Municipal Code as is consistent with the Rules and Regulations of the COGCC.
34	Noise mitigation	Operator will power the drilling rig off of high line power. The proper infrastructure has been supplied by Xcel Energy.
35	Noise mitigation	The Operator shall continuously monitor noise and continuously collect and store noise readings with instruments placed between the Oil and Gas Location and residential Building Units. An ambient sound level survey has been conducted. Operator shall conduct the monitoring and data collection during construction, drilling, and completions operations. This data shall be available to COGCC on tables or graphs within 48 hours of being requested by COGCC.
36	Noise mitigation	To provide long term noise mitigation at this location all production equipment will be powered by electricity. Once flowback operations are complete, a noise study will be completed to determine if additional permanent noise mitigation measures are needed. If found necessary by the sound study, permanent sound panels will be installed around the compressors.
37	Noise mitigation	During the completion phase, only modern low-noise diesel engines (or electric motors) may be utilized.
38	Emissions mitigation	604.c.(2)C.i. Green Completions - Emission Control System: Test separators and associated flow lines and sand traps shall be installed on-site to accommodate green completions techniques pursuant to COGCC Rules.
39	Emissions mitigation	604.c.(2)C.iii. Operator will tie into an existing gas sales line that will be extended to the location. Extraction will send salable quality gas immediately down the sales line.
40	Emissions mitigation	Emission Control Devices (ECDs) and vapor recovery units (VRUs) will be installed. Both units function to reduce volatile organic compound (VOC) emissions that are generated from the crude oil condensate tanks. The ECD and VRU devices reduce VOC emissions by at least 95% through combustion and sequestration.
41	Odor mitigation	805: Oil & gas facilities and equipment shall be operated in such a manner that odors and dust do not constitute a nuisance or hazard to public welfare. The production facilities will have VOC combustors with emission control devices to comply with the Department of Public Health and Environment, Air Quality Control Commission. Operator is in the process of implementing a new base fluid for Oil Base Mud systems. The aromatics and BTEX concentrations are much less than that of generic diesel. With these two things being the major contributors to the odor from diesel, this should lead to less odor at the drill site caused by OBM.
42	Odor mitigation	802.e. Exhaust from all engines, motors, coolers, and other mechanized equipment shall be vented away from all occupied buildings.
43	Drilling/Completion Operations	Operator acknowledges and will comply with the Colorado Oil & Gas Conservation Commission Policy on the Use of Modular Large Volume Tanks in Colorado dated June 13, 2014.
44	Drilling/Completion Operations	604.c.(2)B.i. A closed loop system will be utilized during drilling. No open pits will be used.
45	Drilling/Completion Operations	604.c.(2)L. Closed chamber drill stem tests shall be allowed. All other drill stem tests shall require approval by the Director. None planned for this well.
46	Drilling/Completion Operations	604.c.(2).K. No pits on location.

47	Drilling/Completion Operations	604.c.(2).O. All loadlines shall be bull plugged or capped.
48	Drilling/Completion Operations	Anti-collision: Operator will perform an anti-collision evaluation of all active (producing, shut in, or temporarily abandoned) offset wellbores that have the potential of being within 150 feet of a proposed well prior to drilling operations for the proposed well. Notice shall be given to all offset operators prior to drilling.
49	Drilling/Completion Operations	Operator acknowledges and will comply with COGCC policy for Bradenhead Monitoring during Hydraulic Fracturing treatments in the Greater Wattenberg Area dated May 29, 2012.
50	Drilling/Completion Operations	317.p 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.
51	Drilling/Completion Operations	The Colorado Division of Wildlife defines the active nesting season for Red Tail Hawks as February 15th through July 15th. If the Red Tail Hawk nest is determined to be in use during the nesting season, no drilling will occur while the nest is active. Drilling operations may commence once the nest has been determined to be fledged. If the nest is determined to be inactive, no timing stipulation will occur. Additionally, Extraction will have a certified report completed by a licensed biologist incorporating best management Practices (BMPs) that would mitigate affects to the hawk during the nesting season. These mitigation measures would be employed during the active nesting season from February 15th through July 15th, and allow drilling operations to continue during this period.
52	Drilling/Completion Operations	604.c.(3)iii. For locations within five hundred (500) feet and up-gradient of a surface water body, tertiary containment, such as an earthen berm, is required around Production Facilities. After drilling and completion operations are complete, a water quality retention pond will be constructed along the north edge of the pad. The pond design and volume was submitted and approved as part of the Use by Special Review permit. The water quality pond will provide tertiary containment for this location which is upstream of the Sheep Draw.
53	Drilling/Completion Operations	604.c.(3)vi. No more than two (2) crude oil or condensate storage tanks shall be located within a single berm. An engineered containment design is still in the process of being determined, but will meet Rule 604.c.(3)vi.
54	Drilling/Completion Operations	604.c.(4)B.i. 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. Extraction complies with state and federal laws, rules and regulations governing the presence of any petroleum products, toxic or hazardous chemicals or wastes on the subject lands. In addition Extraction maintains an Emergency Response Plan (ERP) that is designed to provide Extraction employees and designated Emergency Response Team (ERT) members with the information necessary to respond to incidents in a safe, rapid, effective, and efficient manner. To provide lightning mitigation, all equipment within the facility will be grounded in the event that lightning were to strike a piece of equipment. The equipment will be attached to a grounding grid that is buried below grade and dissipates any electricity from a lightning event into this subsurface grid.
55	Drilling/Completion Operations	604.c.(4)B.iii. The location will be completely automated monitor all production operations remotely. In the event that the facility is not operating under normal conditions, the automation system will immediately notify the operator. The automation system also has the ability to remotely perform an emergency shut down if necessary.

56	Drilling/Completion Operations	604.c.(4)B.iv. There will be no flaring or venting of gas upon completion unless there are upset or emergency conditions, or unless there is prior approval from the Director for necessary maintenance conditions.
57	Drilling/Completion Operations	604.c.(4)B.v. Operator will use the following mechanisms to manage storage tank pressure and fluids at the location: Use of a LACT unit, use of stepped ECDs to handle different pressures, and use of jumper lines that help release pressure to the larger burners for upset conditions on both the tanks and the separators.
58	Drilling/Completion Operations	The operator shall only utilize Lease Automatic Custody Transfer (LACT) meters during the production phase.
59	Drilling/Completion Operations	Operator has an MLVT Design Package, certified and sealed by a licensed professional engineer, which is on file in their office and available upon request. The site shall be prepared in accordance with the specifications of the design package prior to tank installation; including ensuring that proper compaction requirements have been met.
60	Drilling/Completion Operations	The MLVT will be at least 75 feet from a wellhead, fired vessel, heater-treater, or a compressor with a rating of 200 horsepower or more. It will be placed at least 50 feet from a separator, well test unit, or other non-fired equipment.
61	Drilling/Completion Operations	All liner seams will be welded and tested in accordance with applicable ASTM International standards.
62	Drilling/Completion Operations	Operator will be present during initial filling of the MLVT and the contractor will supervise and inspect the MLVT for leaks during filling.
63	Drilling/Completion Operations	Operator will comply with the testing and re-inspection requirements and associated written standard operating procedures (SOP) listed on the design package.
64	Drilling/Completion Operations	Signs will be posted on the MLVT indicating that the contents are freshwater.
65	Drilling/Completion Operations	The MLVT will be operated with a minimum of 1 foot of freeboard at all times.
66	Drilling/Completion Operations	Access to the MLVT will be limited to operational personnel and authorized regulatory agency personnel.
67	Drilling/Completion Operations	Operator or contractor will conduct daily visual inspections of the exterior wall and surrounding area for integrity deficiencies.
68	Drilling/Completion Operations	Operator has developed a contingency plan/emergency response plan associated with the MLVT and it is on file at their office.
69	Drilling/Completion Operations	Tanks will be filled using the city of Greeley's water system or other local source through temporary waterlines. No water will be trucked to location.
70	Drilling/Completion Operations	A fabric reinforced liner will be utilized. In the event that a tank breach were to occur, the fabric reinforced liner will prevent a "zippering" failure from occurring. The liner will meet the specifications per the design package.
71	Interim Reclamation	Operator shall be responsible for segregating the topsoil, backfilling, repacking, 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.
72	Final Reclamation	604.c.(2).U. Final Reclamation-The operator shall identify the location of the wellbore with a permanent monument as specified in Rule 319.a.(5). The operator shall also inscribe or imbed the well number and date of plugging upon the permanent monument.
73	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: 73 comment(s)

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
401059571	ACCESS ROAD MAP
401059573	HYDROLOGY MAP
401059574	LOCATION PICTURES
401059575	MULTI-WELL PLAN
401059576	SURFACE AGRMT/SURETY
401059577	WASTE MANAGEMENT PLAN
401059613	NRCS MAP UNIT DESC
401059614	NRCS MAP UNIT DESC
401062711	OTHER
401062712	OTHER
401064570	FACILITY LAYOUT DRAWING
401064741	LOCATION DRAWING
401069462	RULE 303.b.(3)K. COMPLIANCE DOCUMENTATION
401069948	RULE 303.b.(3)K. COMPLIANCE DOCUMENTATION
401069949	OTHER
401069952	RULE 305A CERTIFICATION OF COMPLIANCE
401069966	RULE 303.b.(3)K. COMPLIANCE DOCUMENTATION
401075373	SITING RATIONALE
401081825	OTHER

Total Attach: 19 Files

General Comments

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

Total: 0 comment(s)