

State of Colorado  
Oil and Gas Conservation Commission1120 Lincoln Street, Suite 801, Denver, Colorado 80203  
Phone: (303) 894-2100 Fax: (303) 894-2109

Document Number:

401561765

Date Received:

04/04/2018

## 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:

**456260**

Expiration Date:

**07/24/2021**☒ This location assessment is included as part of a permit application.

## CONSULTATION

- ☐ This location is included in a Comprehensive Drilling Plan. CDP # \_\_\_\_\_
- ☐ This location is in a sensitive wildlife habitat area.
- ☐ This location is in a wildlife restricted surface occupancy area.
- ☐ This location includes a Rule 306.d.(1)A.ii. variance request.

## Operator

Operator Number: 10459

Name: EXTRACTION OIL &amp; GAS INC

Address: 370 17TH STREET SUITE 5300

City: DENVER State: CO Zip: 80202

## Contact Information

Name: Kelsi Welch

Phone: (720) 557-8300

Fax: ( )

email: kwelch@extractionog.com

## RECLAMATION FINANCIAL ASSURANCE

☒ Plugging and Abandonment Bond Surety ID: 20130028☐ Gas Facility Surety ID: \_\_\_\_\_☐ Waste Management Surety ID: \_\_\_\_\_

## LOCATION IDENTIFICATION

Name: MERLIN

Number: PAD

County: WELD

QuarterQuarter: SWNW Section: 29 Township: 6N Range: 67W Meridian: 6 Ground Elevation: 4823

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: 2295 feet FNL from North or South section line

372 feet FWL from East or West section line

Latitude: 40.458723 Longitude: -104.925140

PDOP Reading: 1.3 Date of Measurement: 10/27/2017

Instrument Operator's Name: Danny Tucker

## RELATED REMOTE LOCATIONS

(Enter as many Related Locations as necessary. Enter the Form 2A document # only if there is no established COGCC Location ID#)

This proposed Oil and Gas Location is:

LOCATION ID # FORM 2A DOC #

## FACILITIES

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

Wells	<u>6</u>	Oil Tanks*	<u>8</u>	Condensate Tanks*	<u>      </u>	Water Tanks*	<u>2</u>	Buried Produced Water Vaults*	<u>      </u>
Drilling Pits	<u>      </u>	Production Pits*	<u>      </u>	Special Purpose Pits	<u>      </u>	Multi-Well Pits*	<u>      </u>	Modular Large Volume Tanks	<u>1</u>
Pump Jacks	<u>      </u>	Separators*	<u>8</u>	Injection Pumps*	<u>      </u>	Cavity Pumps*	<u>      </u>	Gas Compressors*	<u>      </u>
Gas or Diesel Motors*	<u>      </u>	Electric Motors	<u>      </u>	Electric Generators*	<u>      </u>	Fuel Tanks*	<u>      </u>	LACT Unit*	<u>1</u>
Dehydrator Units*	<u>      </u>	Vapor Recovery Unit*	<u>7</u>	VOC Combustor*	<u>1</u>	Flare*	<u>      </u>	Pigging Station*	<u>      </u>

## OTHER FACILITIES\*

### Other Facility Type

### Number

ECD	<u>2</u>
Gas Scrubbers	<u>2</u>
Vapor Recovery Towers	<u>1</u>

\*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:

Extraction will trench flowlines in one piping corridor that runs between the drill pad and the separator pad and be placed at 9" to 12" centers. These lines will most likely be 2" or 3" fusion bonded steel pipe and have proper cathodic protection throughout the run. All welds on these are 100% x-ray and hydro tested to the API and Manufactures specs for a class 1500 series flange.

## CONSTRUCTION

Date planned to commence construction: 08/01/2018 Size of disturbed area during construction in acres: 7.04  
Estimated date that interim reclamation will begin: 02/01/2019 Size of location after interim reclamation in acres: 2.61  
Estimated post-construction ground elevation: 4823

## DRILLING PROGRAM

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

Is H<sub>2</sub>S anticipated? No

Will salt sections be encountered during drilling: No

Will salt based mud (>15,000 ppm Cl) be used? No

Will oil based drilling fluids be used? Yes

## 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: Raindance Aquatic Investm

Phone:                                     

Address: 1625 Pelican Lakes Pt.

Fax:                                     

Address: Suite 201

Email:   

City: Windsor State: CO Zip: 80550

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                                     

## 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:	337 Feet	264 Feet
Building Unit:	378 Feet	290 Feet
High Occupancy Building Unit:	5280 Feet	5280 Feet
Designated Outside Activity Area:	5280 Feet	5280 Feet
Public Road:	1820 Feet	1650 Feet
Above Ground Utility:	533 Feet	492 Feet
Railroad:	5280 Feet	5280 Feet
Property Line:	258 Feet	197 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.
- 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: 03/01/2018

## 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.

The Merlin pad was sited in it's proposed location because a housing subdivision & golf course are planned to the west and south, a reservoir is located to the north, and a residence and farm are located to the east. The selected location is sited within the only suitable land parcel and minimizes impacts on those adjacent land uses. We did not amend the existing Raindance pad to the south due to development plans from the Town of Windsor as well as the Raindance golf course master plan—there is not enough space with the required BMPs and CUG/SUA agreements. Also, in order to drill the northern Merlin wells from Raindance, we would need to do a step out of nearly 1 mile, which is not technically feasible. The lone building unit owner located within the Exception Zone has signed a letter stating he has no objection to the Merlin well pad being constructed and operated where proposed and has waived all rights to protest the well pad location. That letter is attached 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: Otero Sandy Loam 5 - 9 % Slopes

NRCS Map Unit Name: Tassel Fine Sandy Loam 5 - 20% 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): Pad site is currently a graded staging area for third party construction equipment.

## WATER RESOURCES

Is this a sensitive area: ☐ No ☒ Yes

Distance to nearest

downgradient surface water feature: 0 Feet

water well: 1444 Feet

Estimated depth to ground water at Oil and Gas Location 52 Feet

Basis for depth to groundwater and sensitive area determination:

Distance to nearest water feature: Ditch 0'

Estimated depth to ground water: 52', 1444' N, Permit #62724-F - Elevation 4774'

Is the location in a riparian area: ☒ No ☐ Yes

Was an Army Corps of Engineers Section 404 permit filed ☒ No ☐ Yes If yes attach permit.

Is the location within a Rule 317B Surface Water Supply Area buffer No zone:

If the location is within a Rule 317B Surface Water Supply Area buffer have all public water supply systems within 15 miles been notified: \_\_\_\_\_

Is the Location within a Floodplain? ☒ No ☐ Yes Floodplain Data Sources Reviewed (check all that apply)

☐ Federal (FEMA)

☒ State

☐ County

☐ Local

☐ Other \_\_\_\_\_

## GROUNDWATER BASELINE SAMPLING AND MONITORING AND WATER WELL SAMPLING

Water well sampling required per Rule 318A

## WILDLIFE

☐ This location is included in a Wildlife Mitigation Plan

☐ This location was subject to a pre-consultation meeting with CPW held on \_\_\_\_\_

## DESIGNATED SETBACK LOCATION EXCEPTIONS

Check all that apply:

☐ Rule 604.a.(1)A. Exception Zone (within 500' of a Building Unit) and is in an Urban Mitigation Area

☐ Rule 604.b.(1)A. Exception Location (existing or approved Oil & Gas Location now within a Designated Setback as a result of Rule 604.a.)

☐ Rule 604.b.(1)B. Exception Location (existing or approved Oil & Gas Location is within a Designated Setback due to Building Unit construction after Location approval)

☐ Rule 604.b.(2) Exception Location (SUA or site-specific development plan executed on or before August 1, 2013)

☐ Rule 604.b.(3) Exception Location (Building Units constructed after August 1, 2013 within setback per an SUA or site-specific development plan)

## RULE 502.b VARIANCE REQUEST

☐ Rule 502.b. Variance Request from COGCC Rule or Spacing Order Number \_\_\_\_\_

ALL exceptions and variances require attached Request Letter(s). Refer to applicable rule for additional required attachments (e.g. waivers, certifications, SUAs).

**OPERATOR COMMENTS AND SUBMITTAL**

Comments

Latitude and Longitude and Surface footages were used from the proposed Merlin 29E-10-1C well.

One MLVT will be provided by Aqualogistics, its size will be 42,000 bbls, with a footprint of 200' x 200'. The MLVT will be in use for approximately 14 days.

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

Signed:

Date: 04/04/2018

Email: kwelch@extractionog.com

Print Name: Kelsi Welch

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: 7/25/2018

**Conditions Of Approval**

All representations, stipulations and conditions of approval stated in this Form 2A for this location shall constitute representations, stipulations and conditions of approval for any and all subsequent operations on the location unless this Form 2A is modified by Sundry Notice, Form 4 or an Amended Form 2A.

**COA Type****Description**

	Operator shall post a copy of the approved Form 2A on the location during all construction, drilling, and well completion activities.
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**Best Management Practices****No BMP/COA Type****Description**

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.
2	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.
3	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.
4	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. Flammable liquids shall not be stored within fifty (50) feet of the wellbore, except for the fuel in the tanks of operating equipment or supply for injection pumps. Where terrain and location configuration do not permit maintaining this distance, equivalent safety measures should be taken.
5	Planning	This location is subject to Conditional Use Grant approval from The Town of Windsor. Operator is currently working through the CUG application with Town of Windsor staff. Operator will host a neighborhood meeting prior to public hearings.
6	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.

7	Traffic control	604.c.(2)D: If required by the local government, a traffic plan shall be coordinated with the local jurisdiction prior to commencement of move in and rig up. Any subsequent modification to the traffic plan must be coordinated with the local jurisdiction. Extraction will be using a truck haul route requested by the Town of Windsor; no Traffic Plan is required.
8	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. The Town of Windsor has requested earthen berms planted with evergreen trees and shrubs to provide visual screening for the pad.
9	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.
10	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.
11	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 flowlines and/or 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.  Typical stormwater BMPs installed include a diversion ditch and berm with sediment traps and installation of wattles where necessary.
12	Material Handling and Spill Prevention	604.c.(2)F. Leak Detention Plan: Extraction will monitor production facilities weekly at a minimum to a maximum of daily 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 request.
13	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 the operator weekly at a minimum to a maximum of daily 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 request.
14	Dust control	805c. 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.
15	Construction	803. Light sources during all phases of operations will be directed downwards and away from occupied structures where possible. In addition to the lighting that will be directed downward to illuminate key areas within the facility, the Merlin pad is surrounded by berming that will act as long term visual mitigation from lights. Furthermore, all produced fluids will be piped off location reducing the amount of light associated with trucks.
16	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.
17	Construction	604.c.(2).G. 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 weekly at a minimum to a maximum of daily to ensure proper working condition. Secondary containment devices shall be sufficiently impervious to contain any spilled or released material. No potential ignition sources shall be installed inside the secondary containment area unless the containment area encloses a fired vessel.



18	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. Metal containment rings will be placed around the separators. All berms will be visually checked weekly at a minimum to a maximum of daily 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 daily to ensure proper working condition. Inspection and record retention of berm inspections will be in accordance per SPCC regulation. All records will be made available to the COGCC upon request.
19	Noise mitigation	604.c.(2)A. Sound walls will be used during drilling and completion operations. Sound walls and/or hay bales will be installed on north and east edges of the pad to mitigate impacts to a recreational trail to the north and building unit to the east. The western and southern sides of the pad will be enclosed by 25 to 30 foot high cut slopes that will assist in noise mitigation. Between the sound walls and cut slopes, the pad will be enclosed to prevent sound from impacting adjacent land uses. Extraction will conduct a sound assessment after drilling and completions activities have concluded to determine what sound mitigation measures, if any, will be needed during production.
20	Emissions mitigation	Operator will bring a new or expand existing gas sales lines, in a timely manner, to send salable quality gas immediately down the sales line. Extraction will ensure the connect is in place to take gas downline immediately.
21	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.
22	Odor mitigation	805. Oil & gas facilities and equipment shall be operated in such a manner that odors do not constitute a nuisance or hazard to public welfare. Operator will utilize advanced oil based mud systems which target the reduction of aromatics.
23	Drilling/Completion Operations	604.c.(2).I. BOPE testing for drilling operations. Upon initial rig-up and at least once every thirty (30) days during drilling operations thereafter, pressure testing of the casing string and each component of the blowout prevention equipment including flange connections shall be performed to seventy percent (70%) of working pressure or seventy percent (70%) of the internal yield of casing, whichever is less. Pressure testing shall be conducted and the documented results shall be retained by the operator for inspection by the Director for a period of one (1) year. Activation of the pipe rams for function testing shall be conducted on a daily basis when practicable.
24	Drilling/Completion Operations	604.c.(2).K. Pit level Indicators shall be used for tanks on location.
25	Drilling/Completion Operations	604.c.(2).O. All loadlines shall be bull plugged or capped.
26	Drilling/Completion Operations	604.c.(2)B.i. Operator will be utilizing a closed loop system.
27	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.
28	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.
29	Drilling/Completion Operations	All liner seams will be welded and tested in accordance with applicable ASTM International standards.
30	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.
31	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.
32	Drilling/Completion Operations	Signs will be posted on the MLVT indicating that the contents are freshwater.
33	Drilling/Completion Operations	The MLVT will be operated with a minimum of 1 foot of freeboard at all times.

34	Drilling/Completion Operations	Access to the MLVT will be limited to operational personnel and authorized regulatory agency personnel.
35	Drilling/Completion Operations	Operator or contractor will conduct daily visual inspections of the exterior wall and surrounding area for integrity deficiencies.
36	Drilling/Completion Operations	Operator has developed a contingency plan/emergency response plan associated with the MLVT and it is on file at their office.
37	Drilling/Completion Operations	Tanks will be filled using a local water source through temporary waterlines. No water will be trucked to location.
38	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.
39	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.
40	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.
41	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).
42	Final Reclamation	604.c.(2).U. 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.

Total: 42 comment(s)

### **Attachment Check List**

<b><u>Att Doc Num</u></b>	<b><u>Name</u></b>
2158151	MULTI-WELL PLAN
2478649	CONST. LAYOUT DRAWINGS
2478650	RULE 306.E. CERTIFICATION
2478651	CORRESPONDENCE
2478663	ACCESS ROAD MAP
401561765	FORM 2A SUBMITTED
401562381	NRCS MAP UNIT DESC
401562382	LOCATION PICTURES
401562386	HYDROLOGY MAP
401563743	SURFACE AGRMT/SURETY
401573275	FACILITY LAYOUT DRAWING
401578451	WAIVERS
401584678	LOCATION DRAWING
401590986	WASTE MANAGEMENT PLAN
401595988	OTHER
401608771	PRE-APPLICATION NOTIFICATION CERTIFICATION

Total Attach: 16 Files

### **General Comments**

<b><u>User Group</u></b>	<b><u>Comment</u></b>	<b><u>Comment Date</u></b>
Permit	Final review complete.	07/24/2018

Permit	<p>Status Active - corrections made with Operator concurrence:  - replaced multi-well plan with updated attachment.  - operator confirmed cultural distances on 2A are correct; changes were made to the APDs.</p> <p>Permitting review complete.</p>	07/19/2018
Permit	<p>Status Pending - contacted Operator for corrections/clarification:  - two APD well location plats depict BHLs ~300' FWL of section 28, but current multi-well plan shows all BHLs on the section line (0' FEL, sec 29). Request revised multi-well plan or revised well location plat for Merlin 1C and 2C APDs.  - well distance to nearest building (337') does not match APDs (all have this distance less than 337').  - well distance to nearest public road (revised to 1820' by OGLA staff) does not match APDs.  - well distance to nearest above-ground utility (533') does not match APDs (all have this distance less than 300').</p>	07/11/2018
OGLA	<p>Operator provided additions to the noise mitigation and berm construction BMPs &amp; updated the Access Road Map.</p> <p>OGLA Supervisor has completed Siting Rationale review. OGLA task passed.</p>	06/13/2018
OGLA	<p>IN PROCESS - Operator revised the distance to the nearest Public Road, provided additional siting rationale, revised the Traffic Control BMP, revised the Visual Impact mitigation BMP, revised the Lighting Impact mitigation BMP, revised the Noise mitigation BMP, revised the Emissions mitigation BMP, provided an update on the neighborhood meeting, revise the pipeline description, revised the count of VRUs, &amp; concurred with removing the unnecessary Exception Location Request attachment.</p> <p>OGLA review completed. Waiting on Siting Rationale review by OGLA Supervisor.</p>	06/04/2018
OGLA	<p>ON HOLD - Requested operator revise the distance to the nearest Public Road, provide additional siting rationale, revise the Traffic Control BMP, revise the Visual Impact mitigation BMP, revise the Lighting Impact mitigation BMP, revise the Noise mitigation BMP, revise the Emissions mitigation BMP, provide an update on the planned neighborhood meeting, &amp; concur with removing the unnecessary Exception Location Request attachment. Due by 6/7/18.</p>	05/07/2018
LGD	<p>The site is in the Town of Windsor corporate limits and Extraction Oil and Gas has submitted a Conditional Use Grant (CUG) through the Town of Windsor. The application is currently under review. The CUG requires a neighborhood meeting and two public hearings, with approval from the Windsor Town Board.</p> <p>An Oil and Gas CUG in this location is subject to the Town's standard conditions of approval (review and approval pending):</p> <ol style="list-style-type: none"> <li>1. All Planning Commission and staff comments are addressed.</li> <li>2. The truck hauling route shall remain in accordance with Exhibit A attached hereto, unless otherwise approved by the Town.</li> <li>3. Truck hauling periods shall avoid before and after school traffic (7:30 a.m. – 8:15 a.m. and 2:45 p.m. - 3:30 p.m.), and avoid peak times of commuter traffic (7:00 a.m. – 8:30 a.m. and 4:30 – 6:00 p.m.).</li> <li>4. All landscape screening shown on plan shall be completed no later than 60 days after the initial drilling phase and shall not be postponed until development of the golf course. Irrigation shall be included to ensure establishment of all plant materials.</li> <li>5. Sound walls shall be setback a minimum of 30 feet from the Poudre Trail temporary and permanent trails.</li> <li>6. The Town's standard conditions of approval for oil and gas facilities, with amendments, as noted: <ol style="list-style-type: none"> <li>1. Prior to the commencement of drilling, the applicant shall submit comprehensive</li> </ol> </li> </ol>	05/01/2018

	<p>"Drilling and Site Improvement Plans" for review and approval by the Town. Such plans shall address initial drilling activities, initial installation of site improvements and details, and on-going perpetual maintenance of the subject site including, but not limited to, the following:</p> <p>a. Site access plan. The Drilling and Site Improvement Plans and supplemental information shall address site access points and haul routes for review and approval.</p> <p>b. Public street clean-up and tracking prevention. The Drilling and Site Improvement Plans and supplemental information shall include a tracking pad for review and approval.</p> <p>c. Site grading. The Drilling and Site Improvement Plans and supplemental information shall address site grading, including any earth berms for emergency containment.</p> <p>d. Site lighting. The Drilling and Site Improvement Plans and supplemental information shall include details regarding site lighting fixtures and locations. Security and other site lighting shall utilize full cutoff light fixtures to mitigate light pollution.</p> <p>e. Temporary screening. The applicant shall install a buffer to screen the initial drilling activities and installation of site improvements from surrounding neighborhoods and streets. The temporary buffer/sound walls shall enclose the drilling operations to provide screening and noise mitigation barriers in the direction of nearby homes, as appropriate.</p> <p>f. Permanent screening. Given the close proximity to residential neighbors, the Drilling and Site Improvement Plans shall depict proposed long-term screening materials including landscaping, earth berms and any other screening methods to mitigate visual impacts.</p> <p>g. Fencing. The Drilling and Site Improvement Plans shall depict fencing of the perimeter of the site. Fencing materials shall be reviewed for approval by the Town based upon the character of the surrounding neighborhood.</p> <p>h. Oil and gas equipment.</p> <p>(1) The applicant shall utilize electric motors in order to mitigate the noise impacts to the neighboring properties. The applicant shall utilize noise dampening methods consistent with the best management practices (BMPs) utilized in the basin. Such methods include, but are not limited to, sound walls, blankets, and other noise mitigation installed at the source of any equipment creating such noise. Noise mitigation methods known as "Quite Fleet Technology," utilized by Liberty Oilfield Services, shall be used as examples of BMPs to be replicated.</p> <p>(2) The applicant shall ensure that the wells and tanks are of the minimum size required to satisfy present and future functional requirements to mitigate visual impacts.</p> <p>(3) Low profile tanks shall be utilized and shall be installed in the least visible manner possible.</p> <p>(4) All tanks and equipment shall be painted to blend-in with the surrounding landscape.</p> <p>i. Air quality.</p> <p>(1) The applicant shall participate in any required Environmental Protection Agency (EPA) air quality monitoring and/or testing by allowing EPA to install equipment on site for said monitoring and testing.</p> <p>(2) The applicant shall install and operate an emissions control device (ECD) capable of reducing Volatile Organic Compound (VOC) emissions on the subject oil and gas equipment in accordance with Colorado Oil and Gas Conservation</p>		
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	<p>Commission (COGCC) and/or the Colorado Department of Public Health and Environment (CDPHE) rules and regulations.</p> <p>(3)The applicant shall submit to the Town copies of all air emissions reporting as required by the COGCC and/or the CDPHE's Air Pollution Control Division.</p> <p>j.Water quality.</p> <p>(1)The applicant shall ensure that any hydrocarbon discharges from the site comply with all state and federal water quality requirements. Any hydrocarbon discharges shall be properly reported to COGCC, and remediated according to COGCC requirements in all cases.Reportable hydrocarbon discharges shall also be reported to the Windsor Local Government Designee (LGD).</p> <p>(2)The applicant shall provide test results from Groundwater Baseline Sampling and Monitoring required by COGCC Rule 318A.e(4) to the Town. (condition updated 10/28/13 to reflect updated COGCC rule)</p> <p>k. Emergency containment.The secondary containment berm surrounding all storage vessels shall be designed and constructed to contain a minimum of 110% of the volume of the largest vessel located within the containment area or to State of Colorado standards, whichever requirements are more stringent.</p> <p>l.Waste disposal.The applicant shall submit to the Town copies of all waste management reports as required by the COGCC and/or the CDPHE rules and regulations.</p> <p>m.The following certification blocks shall be included on the Drilling and Site Improvement Plans:</p> <p>(1)A signed owner's acknowledgement certification block.</p> <p>(2)A signed drilling operator's acknowledgement certification block.</p> <p>n. The following notes shall be included on the Drilling and Site Improvement Plans:</p> <p>(1)The applicant shall comply with all rules and regulations of the Colorado Oil and Gas Conservation Commission (COGCC).</p> <p>(2)The applicant shall comply with all rules and regulations of the Colorado Department of Public Health and Environment (CDPHE).</p> <p>(3)The applicant shall maintain on-going compliance with all conditions of the Town and Windsor-Severance Fire Rescue.</p> <p>(4)The facilities shall be kept clean and otherwise properly maintained at all times.</p> <p>(5)If access to the site is proposed from a Town of Windsor street, such access point(s) shall require approval from the Town of Windsor Engineering Department and any required access improvements, street clean-up, tracking pads, etc., shall be addressed accordingly.</p> <p>2. The applicant shall address and comply with the conditions of Windsor-Severance Fire Rescue.</p> <p>3. All trucks and equipment that are used by primary contractors of Extraction Oil and Gas Company (e.g. drilling, completions, roustabout services) exclusively on the location during drilling and completion activities will be equipped with white noise backup alarms. As per OSHA regulations, in cases where rear view cameras and/or spotters are used 100% of the time, the truck or equipment will not have a backup alarm.</p>		
Permit	Passed Completeness.	04/16/2018	

Permit	Returned to draft for: - attachment "PRE-APPLICATION NOTIFICATION CERTIFICATION" is damaged/corrupt and unable to open	04/13/2018
OGLA	Passed Buffer Zone completeness review	04/11/2018

Total: 10 comment(s)