



WASHINGTON PAD

Section 10, T1S R68W
City of Thornton, CO

**City of Thornton – Council Communication
City Council Meeting, November 29, 2022**

Accessible Here: <https://www.thorntonco.gov/government/citydevelopment/Documents/oil-gas/washington-pad-0a-city-council.pdf>

COUNCIL COMMUNICATION

Meeting Date: November 29, 2022	Agenda Item: 12D	Agenda Location: Action Items	Goal(s):	Legal Review: <i>Ty</i>	<input type="checkbox"/> 1 st Reading <input type="checkbox"/> 2 nd Reading
Subject: A resolution authorizing an Operator Agreement with Extraction Oil & Gas, Inc. for the development of the Washington Pad oil and gas operation, which is generally located southeast of I-25 and E-470.					
Department Head Review: Randy Grant <i>RG</i> Approved by: Kevin S. Woods <i>RK/KW</i>				Ordinance previously introduced by: _____	
Presenter(s): Collin Wahab, Acting Current Planning Manager					

SYNOPSIS:

Extraction Oil and Gas, Inc., a wholly owned subsidiary of Civitas Resources Inc., is an oil and gas operator (Operator) who has requested to enter into negotiations with the City for the proposed Operator Agreement, which allows the development of the Washington Pad oil and gas operation. The proposed terms and conditions of the Operator Agreement exceed State and local regulatory requirements. The Operator Agreement is proposed in accordance with process outlined in the Thornton Municipal Code (Code).

RECOMMENDATION:

Staff recommends Alternative No. 1, to approve the resolution authorizing the Operator Agreement over the alternative paths outlined in the Code.

BUDGET/STAFF IMPLICATIONS:

The proposed Agreement provides for the costs of verifying compliance with the terms of the Agreement to be reimbursed by the operator up to \$175,000 over the term of the Agreement. Additionally, the Agreement provides for a \$100,000 payment to the City to cover road and infrastructure impacts related to the development. The Agreement also provides for \$220,000 reimbursement to the Thornton Fire Department to cover the costs for any reasonably necessary training and equipment of emergency response personnel required during the initial ten years of the Operator Agreement. The City will also receive increased ad valorem tax revenue as the property moves out of agricultural land use designation. These terms were considered by the City’s Fire Department and Finance Department. A corresponding Impact Statement from the Fire Department can be found in Attachment 1 of this communication.

ALTERNATIVES:

1. Approve the resolution authorizing the Operator Agreement.
2. Do not approve the resolution.

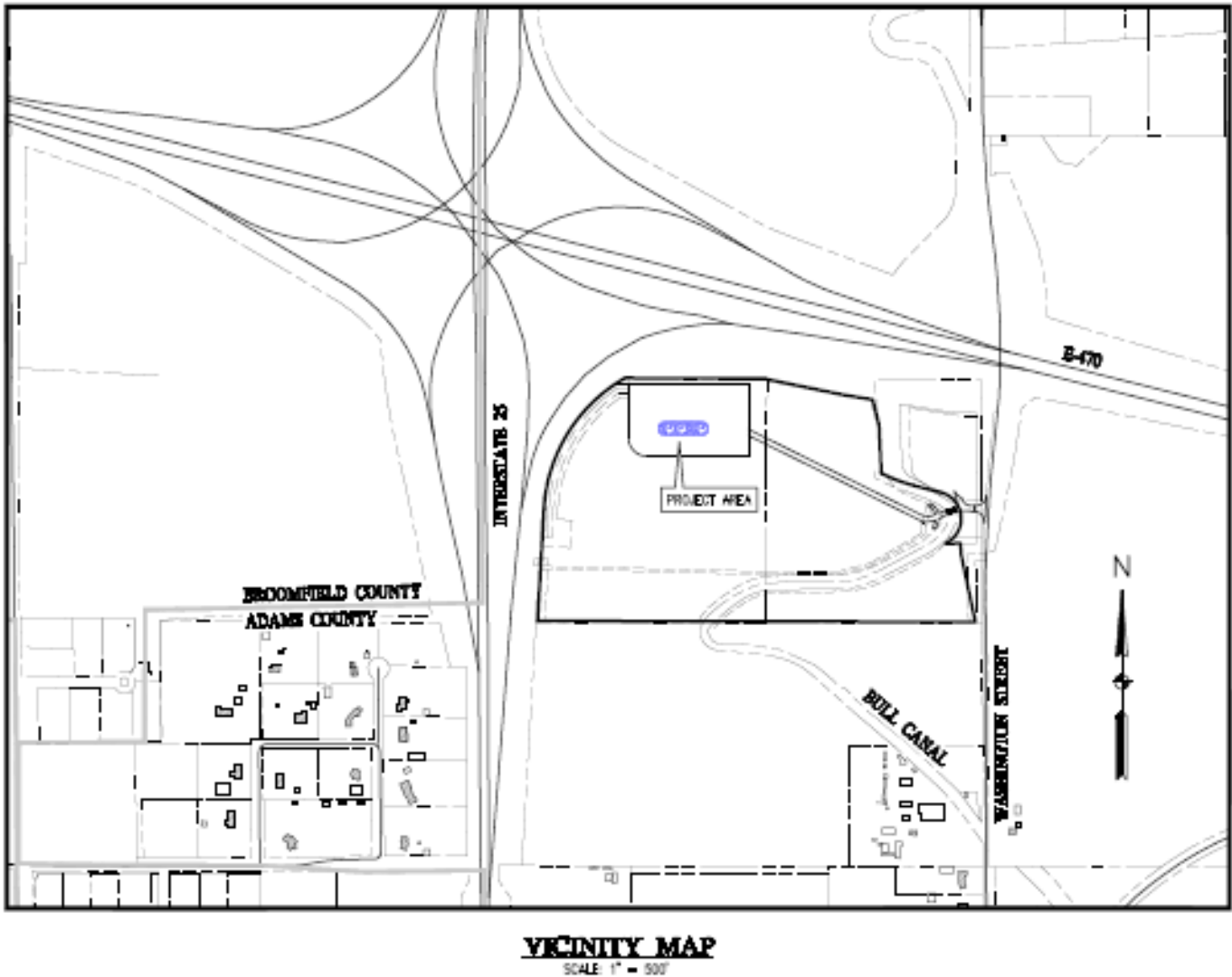
BACKGROUND (ANALYSIS/NEXT STEPS/HISTORY): (includes previous City Council action)

Oil and gas mineral interest owners have certain rights of development. The City’s oil and gas regulations are located in Article X of the Code and were adopted in August 2017. These regulations provide alternative paths by which oil and gas operators may seek approval to drill in the City. Section 18-862(c) of the Code allows an operator to seek authorization to conduct oil and gas operations through a negotiated Operator Agreement between the City and the operator. This Operator Agreement

would provide the regulatory framework for how findings of compliance and authorization will be made and does not constitute a finding of compliance with the standards, or authorization to proceed to begin construction. Additionally, Section 18-883(a) of the Code provides that the combination of negotiated terms and conditions of any operator agreement must be at least as protective of public, health, safety, welfare, and the environment as the protections afforded by the requirements and standards of the City's oil and gas regulations. If Council rejects the Operator Agreement, the Operator would be eligible to pursue development in accordance with the oil and gas permit process or the expedited oil and gas permit process provided for in the Code.

Following a pre-application conference as required by the Code, the Operator requested the City enter into negotiations for an operator agreement for the development of the Washington Pad, proposed to be situated roughly at the southeast corner of the I-25 and E-470 interchange. See Figure 1, Vicinity Map.

Figure 1



The subject property is vacant and not currently subdivided within the City. The property is zoned Planned Development (PD) and the property owner has recently submitted an application for a Zoning

Amendment and Conceptual Site Plan to allow the development of several warehouse buildings. Figure 2 shows existing surrounding land uses and a 100-foot radius surrounding the site. This proposed site was the second location proposed by the Operator as a result of an alternate site analysis requested by the City as a part of the Operator Agreement negotiation. The analysis considered six feasible sites in the immediate area based on the technical feasibility of developing proposed mineral development area and the potential impacts to human, environmental, and wildlife receptors. It was determined that the current location had less of an impact on the City than any of the other sites included in the analysis based on the distance to existing residential building units, schools or child care centers, Colorado Parks and Wildlife High Priority Habitats, and future development proposals. There are only fifty-six (56) parcels within the one-half mile radius of the site with only approximately thirty-five residential lots within that area.

Figure 2



Staff, with the assistance of outside technical and legal counsel has negotiated a proposed agreement that would allow for the Operator's proposed development while ensuring such development occurs in a manner that is more protective of public, health, safety, welfare, and the environment than the protections afforded by the requirements and standards of the City's oil and gas regulations. The terms

of the proposed Operator Agreement include standards for the development which exceed both State and Code requirements. For example, such terms include:

- Compensation package for the City to offset the cost of road impacts, infrastructure, emergency services, and ongoing compliance verification with the operator agreement.
- Additional requirements for the protection of human health and the environment, such as:
 - Emission reduction measures (electric equipment, Tier 4+ fracturing pumps, ongoing 24-hr computerized monitoring, response to Ozone Action Days, and early implementation of LDAR inspections).
 - Availability of a water quality testing program to any persons with an available water source within one-half (1/2) mile of the radius of the proposed Location.
 - Requirement for PFAS-free fracking fluids.
- Additional measures to proactively address common complaints associated with lighting, noise, odor, and traffic:
 - All permanent lighting or lighting higher than a perimeter wall must be downward facing and shielded to prevent glare.
 - During pad construction, the Operator agrees that noise levels shall not exceed those produced by the construction of a typical commercial development.
 - Operator must use a filtration system or additives to the drilling and fracturing fluids to minimize odors. Operator is prohibited from masking odors from any oil and gas facility site by using fragrances.
 - The Operator will comply with all Transportation and Circulation requirements as contained in the City Development Code as may be reasonably required by the City's Traffic Engineer and will comply with all applicable hazardous material regulations.
- Improved communication protocols to keep the City apprised of relevant information. This is achieved through notification and reporting (not otherwise required), including reporting of development stages, documentation of the measures taken for emission reduction, annual certification of compliance, and notification on non-compliance with other regulatory requirements.
- Prescribed annual review, evaluation, and update of the Cumulative Impacts Plan. This plan is one of the required and enforceable plans provided in the Operator Agreement.
- The Operator shall not use City water for its oil and gas operation and shall notify the City, upon its request, of the source(s) of water to be used at the location. An Impact Statement from the City's Water Resources Department can be found in Attachment 3 of this communication.

In addition to these heightened standards, the Operator Agreement outlines the plugging and abandoning of five existing wells within the City's growth areas, three of which are within existing City limits, upon development of the proposed Washington Pad.

PUBLIC NOTICE AND RESPONSE:

Public Notification: Notice of the neighborhood meeting was sent to all residents within a half-mile radius of the proposed site. Additionally, information regarding the neighborhood meeting was posted on the City's community calendar on October 26, 2022.

Public Response: A neighborhood meeting was held by the Operator to present and discuss the proposed Operator Agreement. The meeting was held at the Hilton Garden Inn, 14275 Lincoln Street, Thornton, CO on November 7, 2022, and approximately 20 members of the public attended, 17 of which attended virtually via the Zoom option that was provided. There were also approximately nine representatives of the City at the meeting. Residents and property owners within one-half mile of the boundary lines of the proposed oil and gas location were noticed for this meeting, and an affidavit of posting has been provided by the Operator and can be found in Attachment 4 of this communication. The Operator introduced themselves and presented an overview of the proposal, including details on the proposed site plan, schedule, project mitigations, and best management practices.

After the presentation, participants expressed concern over potential negative impacts to the surrounding community. Specifically, concerns were raised about the chemicals, emissions, and byproducts associated with the proposal. There was also discussion regarding the location of the mineral development area and the land uses which are located on the surface of this area. There were also questions regarding potential impact to adjacent bodies of water as well the source of the water used for the facility. Additionally, there were questions regarding the monetary benefits the City would receive if the proposal was approved. The Operator responded to all questions at the meeting and committed to providing additional transparency regarding the mineral development area and overall timeline of the proposal.

HISTORY:

The property was annexed by Ordinance 1942 on January 21, 1990, and consecutively zoned Business Park.

The property was later categorically rezoned PD in the City-wide zoning transition on January 25, 1993, by Ordinance 2230.

Attachments:

- Attachment 1: Fire Service Impact Statement
- Attachment 2: Water Supply Impact Statement
- Attachment 3: Neighborhood Meeting Affidavit of Posting

Attachment 1
Fire Services Impact Statement – Washington Pad

Primary response assigned to the Thornton Fire Department Hazardous Materials Team

This facility is a non-typical commercial facility with respect to standard life-safety (Fire and EMS) response. Low frequency, with high potential risk requires a collaborative response should a major incident arise. These facilities are built with high safety standards and incidents are rare. However, we intend to remain ready for first response to any hazard presented in our community.

Thornton Fire Department will be asking for assistance with equipment procurement and training to improve first response capabilities to mitigate incipient fires at the source. Significant events, while infrequent, require us to utilize our own hazardous materials trained technicians in a coordinated regional response with neighboring North Area fire departments which may be focused on “identifying, isolating, and evacuating” communities and areas threatened by the event itself should the event outsize our resources. Automatic response of Adams and Jefferson County Hazardous Materials Team for full mitigating efforts will also occur on events expected to be long, and large in duration. Any size of incident is expectant of an operator response with trained and equipped personnel to work as subject matter experts, and in cooperation with our first responders.

Thornton Fire Department has expressed a desire for the operator to provide appropriate fire-fighting foam and foam distribution appliances for us to assist in first response mitigation and protection efforts. We are confident to be part of the Emergency Response Plan development and review and to engage in periodic training and familiarization with the operator’s emergency response personnel.

With these expectations in mind, the impact of this development is within acceptable response parameters for the Thornton Fire Department.

**Attachment 2
Water Supply Impact Statement – Washington Pad**

Applicant is required to submit a Water Availability Plan:

The plan shall identify the anticipated volume of water needed for each phase of the oil and gas operation, and verification of all sources of water for the life of the operation. The plan shall take into consideration that the city will not provide City water for use by an oil and gas operation.

Anticipated volume of water for each phase:

According to the applicants, the proposed operation estimates a total of 49,450 barrels (approximately 2 million gallons or 6.37 acre-feet) of water for drilling, operations, completion and reclamation of the project.

Verification of Sources:

Water for this operation will not be supplied by the City of Thornton, so there is no impact to the City's water supply or system capacity.

The applicant has not yet provided verification of these sources.

Attachment 3

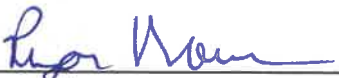
AFFIDAVIT OF POSTING

LEGAL NOTICE OF NEIGHBORHOOD MEETING

State of Colorado)
) ss.
County of Adams)

I, Ryan Nance, being first duly sworn upon oath depose and say that I did, on October 26, 2022, which is not less than ten (10) days before the date scheduled for the neighborhood meeting, sent notice to residents and property owners within a minimum one-half mile radius of the boundary lines of the proposed oil and gas location, containing the time and place of the meeting, the nature of the meeting, the location of the property that is the subject of the meeting, and the name of the applicant(s). A COPY OF THE NOTICE SENT IS ATTACHED HERETO.

This meeting will be held on November 7, 2022, at 6 p.m. at the Hilton Garden Inn, 14275 Lincoln St., Thornton, CO 80023. Remote access to the neighborhood meeting is also being offered.

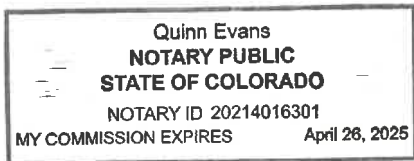
Signed: 
Ryan Nance

Date: October 26, 2022

Subscribed and sworn to before me by Ryan Nance. In the County of Adams, State of Colorado, This 26 day of October, 2022.

Notary Public





RE: NOTICE OF NEIGHBORHOOD MEETING – Washington Pad

October 26, 2022

Dear Resident/Property Owner:

Extraction Oil & Gas, Inc., (“Extraction”), a wholly-owned subsidiary of Civitas Resources, Inc., is pursuing an Operator Agreement with the City of Thornton to develop an oil and gas location. The proposed oil and gas location is on the south side of E-470 and east side of I-25 (see Vicinity Map below). You are receiving this notice because you reside or own property within one-half mile of the boundary lines of the proposed oil and gas location.

Extraction is holding a neighborhood meeting to present its proposal to residents, property owners, and other members of the community and to gather input and answer questions regarding the proposal. **The meeting will be held at the Hilton Garden Inn, 14275 Lincoln St., Thornton, CO 80023.**

The meeting will also have a virtual attendance option. Below are the specific details to join the presentation and discussion via Zoom or in person. We look forward to meeting local community members and hearing feedback on this proposal.

The meeting will be held:

Date: Monday, November 7, 2022

Time: 6:00 to 8:00 pm Mountain Time

How to join the virtual meeting

Online:

Join Zoom Meeting

bit.ly/civitasthornton



Contact Information

Civitas Community Relations
Washington@civiresources.com or
CommunityRelations@civiresources.com
720-279-9842

City of Thornton Planning Department
Collin Wahab, Principal Planner
collin.wahab@thorntonco.gov
9500 Civic Center Drive
Thornton, CO 80229

If you have specific comments or questions about the proposal, please email them to Washington@civiresources.com and Collin Wahab (collin.wahab@thorntonco.gov) prior to the meeting by 12:00 pm Friday, November 4, 2022. Your specific comments and questions will be compiled, consolidating similar or duplicative questions and comments, and then addressed by Extraction after the presentation. Questions will also be taken live, or via the “comments” portal within the virtual meeting.

Ground Rules and Information for the Virtual Public Meeting

Please note that all participants will be automatically placed on mute when they join the call to minimize interruptions and background noise during the presentation. The chat function will also be disabled to avoid distractions during the presentation.

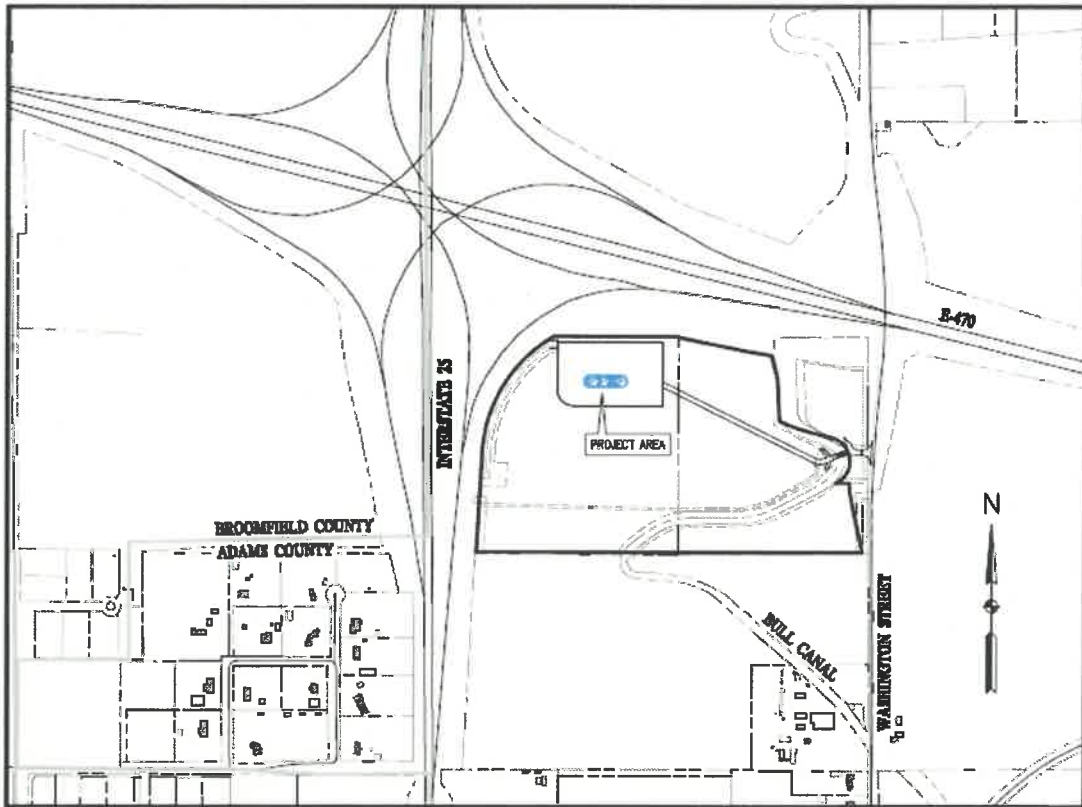
To ask specific questions or provide specific comments about the proposal via Zoom, please enter them in the “Q&A tab”. Your comments and questions may be entered at any time during the presentation but will not be addressed until the presentation is complete.

Sincerely,

Civitas Community Relations

WASHINGTON PAD

LOCATED IN SECTION 10, TOWNSHIP 1 SOUTH, RANGE 68 WEST
OF THE 6th PRINCIPAL MERIDIAN
CITY OF THORNTON, ADAMS COUNTY, COLORADO



VICINITY MAP

RESOLUTION

A RESOLUTION AUTHORIZING AN OPERATOR AGREEMENT WITH EXTRACTION OIL & GAS, INC. FOR THE DEVELOPMENT OF THE WASHINGTON PAD OIL AND GAS OPERATION, WHICH IS GENERALLY LOCATED SOUTHEAST OF I-25 AND E-470.

WHEREAS, Extraction Oil & Gas, LLC (Applicant) has requested to enter into an Operator Agreement with the City, attached hereto as Exhibit A and incorporated herein by reference, for the development of an oil and gas operation (Washington Pad); and

WHEREAS, Thornton Municipal Code at Section 18-862(c) provides that an applicant may seek authorization to conduct oil and gas operations within the City through a negotiated agreement between the City and the operator; and

WHEREAS, Sections 18-883 through 18-885 of the Code provide for the process by which an operator may negotiate an operator agreement and that any such proposed agreement shall be presented to the City Council such agreement at a regular or special meeting thereof; and

WHEREAS, the combination of the negotiated terms and conditions of any operator agreement must be at least as protective of public health, safety, welfare, and the environment as the protections afforded by the requirements and standards of the City's regulations; and

WHEREAS, the City finds that the negotiated terms of the proposed Operator Agreement therefore meet and exceed the requirements of the Thornton City Code and are more protective of public health, safety, welfare, and the environment.

NOW THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF THORNTON, COLORADO, AS FOLLOWS:

1. City Council finds that the proposed Agreement complies with the provisions of Sections 18-883 and 18-884 of the Thornton City Code.
2. The terms of the Operator Agreement between the Applicant and the City as set forth in the form attached hereto is hereby approved.
3. The City Manager is hereby authorized to execute on behalf of the City, and the City Clerk to attest, the Operator Agreement in substantially the same form as attached hereto.

PASSED AND ADOPTED at the regular meeting of the City Council of the City of Thornton, Colorado, on _____, 2022.

CITY OF THORNTON, COLORADO

Jan Kulmann, Mayor

ATTEST:

Kristen N. Rosenbaum, City Clerk

OIL AND GAS OPERATOR AGREEMENT

THIS OIL AND GAS OPERATOR AGREEMENT (the "Agreement") is made and entered into this day of _____, 20_, by and through Extraction Oil & Gas, Inc., with an address of 555 17th Street, Suite 3700, Denver, CO 80202 ("Extraction" or the "Operator"), and the City of Thornton, Colorado ("Thornton" or the "City"), a home rule municipality with an address of 9500 Civic Center Drive, Thornton, Colorado 80229, which may be collectively referred to herein as the "Parties," or individually as a "Party."

WHEREAS, Operator engages in the exploration, development, production, and marketing of natural gas, oil, and natural gas liquids; and

WHEREAS, Operator holds oil and gas interests within and around Thornton and plans to develop its interests therein; and

WHEREAS, Operator is a wholly owned subsidiary of Civitas Resources, Inc. ("Civitas" or "Parent"), and Parent maintains certain surety and insurance coverages on behalf of Operator; and

WHEREAS, the City and Operator value an approach to oil and gas development that protects public health, safety, welfare, and the environment, including wildlife resources; and

WHEREAS, the City and the Operator desire to enter into this Agreement pursuant to Sec. 18-862(c), Sec. 18-883, Sec. 18-884, and other applicable provisions of the City of Thornton Development Code ("Code") allowing for this Agreement to be prepared, executed, and approved; and

WHEREAS, the City and the Operator have agreed that, unless prohibited by a state or federal regulator, the Operator will adopt the standards set forth in Exhibit "B" (hereinafter referred to as "Standards") for Operator's oil and gas operations at the location set forth on Exhibit "A" (the "Location").

NOW, THEREFORE, in consideration of the mutual obligations and benefits set forth in this Agreement, including the recitals, and for other good and valuable consideration, the receipt of which is hereby acknowledged, the City and the Operator agree as follows:

1. Effective Date/Term

This Agreement will be effective upon City Council's approval by resolution and signature by both Parties (the "Effective Date"), and will continue in effect for so long as Operator is pursuing or holds Colorado Oil and Gas Conservation Commission ("COGCC") permits for the operations contemplated by this Agreement and/or for so long thereafter as the Operator has operations or owns or controls wells at the Location and any associated locations, including without limitation any reclamation operations, or unless otherwise terminated by law (the "Term").

2. New Wells and Location

The Parties agree that the New Wells and the Location will be subject to the terms of this Agreement.

- (1) "New Well" shall mean any Operator-operated well spudded during the Term of this Agreement at the Location, including any production facilities directly associated with such well, insofar as the production facilities and surface of the well are located on the Location.
- (2) For purposes of this Agreement, a New Well shall not include the re-entry of a previously drilled well. The Parties agree that Operator's future development of New Wells in the City will be limited to the single pad site identified and depicted on Exhibit A (the "Location"), and no New Wells will be drilled from the surface of any other location within the City. The Operator's re-entry or recompletion of any previously drilled well in the City is subject to Article X and other relevant provisions of the Thornton Code.
- (3) The Operator agrees that it will drill no more than ten (10) New Wells on the Location. Operator may perform all surface and downhole well maintenance on the New Wells and Location in accordance with the applicable standards provided in Exhibit B to this Agreement and COGCC Rules.
- (4) Operator has consulted with the City, to the City's satisfaction, to identify alternative sites for Operator's development. The Location was mutually selected by the Operator and the City as the best location for Operator's proposed alternative sites following this consultation.

3. Compensation

- (1) City Road Impacts, Infrastructure and Ongoing Compliance Verification: Operator shall remit to the City a total of \$100,000 for the Location to cover road wear and tear and infrastructure depreciation associated with Operator's operations under this Agreement. Payment under this provision shall be due within 30 days of commencement of construction operations at the Location.
- (2) Emergency Services: Operator shall pay \$220,000 for any reasonably necessary training and equipment of emergency response personnel required during the initial ten years of this Agreement from the effective date due to the operations contemplated by this Agreement, including any inventory of Aqueous film forming foam (AFFF) free of per- and polyfluoroalkyl substances reasonably required to be purchased from time to time so that sufficient quantities are available to respond to emergencies at the Location. Operator shall reimburse the appropriate emergency agencies for their expenses resulting from the Operator's operations and may provide training through providing, at no cost to the appropriate emergency agencies, emergency and hazardous materials training the Operator makes available to emergency responders. After ten years from the effective date of this Agreement, the City may, if requested by the relevant emergency services provider, require additional reimbursement for reasonably necessary additional or replacement equipment and additional training for emergency response personnel in an amount not to exceed \$2,500 annually.
- (3) Operator Agreement Compliance Fund: Operator agrees to reimburse the City for its costs in verifying ongoing compliance with this Agreement, under the terms and subject to the limitations in this Section. Operator shall provide \$50,000 to Thornton beginning

on the date that construction of the Location commences. Operator will be required to provide additional ongoing compliance funds to the City in the amount of \$50,000 within 90 days of the date the wells at the Location begin production. If Thornton's compliance costs exceed the \$100,000 previously provided, additional ongoing compliance funds will be provided by Operator to Thornton in \$25,000 increments as requested by Thornton. The total amount of required compliance reimbursement shall not exceed \$175,000.00 for the life of the Agreement.

4. Neighborhood Meeting

The Operator has held, and city staff has prepared a summary of, a neighborhood meeting in accordance with Section 18-866 of the Thornton City Code.

5. City Submittal Materials

Operator shall submit the following materials to the City:

- (1) Surface Use Agreement
- (2) Title Commitment
- (3) List of Permits and Approvals obtained or yet to be obtained from state or federal agencies other than COGCC
- (4) Plans and Materials¹
 - a) Air Quality Impact Assessment and Mitigation Plan
 - b) Lighting Study
 - c) Noise Management Plan
 - d) Stormwater Management Plan
 - e) Flowline Management Plan
 - f) Water Availability Plan
 - g) Water Quality Impact Assessment & Monitoring Plan
 - h) Wildlife and Habitat Assessment Mitigation Plan
 - i) Landscaping and Reclamation Plan
 - j) Grading, Drainage, and Erosion Control Plan
 - k) Geological Assessment Report
 - l) Vicinity Maps
 - m) Facilities Plan
 - n) Emergency Preparedness and Response Plan
 - o) Transportation Plan

¹ Content of plans and reports should be provided as described in Sec.18-881. In the absence of a plan description in Section 18-881, refer to COGCC Rule 304.c.

- p) Chemicals & Hydraulic Fracturing Fluids Disposal and Reporting Plan
- q) Spill Prevention, Control, and Countermeasure Plan
- r) Leak Detection and Repair Plan
- s) Operating Plan
- t) Recreation Impact Assessment & Mitigation Plan
- u) Public Facilities and Services
- v) Odor Mitigation Plan
- w) Dust Mitigation Plan
- x) Waste Management Plan
- y) Operations Safety Management Program
- z) Cumulative Impact Plan
- aa) Any other materials reasonably deemed necessary by the city manager.

All materials submitted to the City manager or their most up-to-date versions available shall also be made part of Operator's concurrent application to the COGCC pursuant to COGCC Rule 303.a.(6).A. Operator shall ensure that all most recent submittal materials are included as part of Operator's COGCC Application prior to the Director's Recommendation of the OGD. P.

6. Completeness Determination

The city manager or designee shall review the above submittal materials to determine whether they are complete and provide Operator within 30 days of receipt of submittal materials written notice that either the materials are complete or notice that materials are incomplete and that identifies any deficiency. Operator shall promptly correct any such deficiency in the submittal materials by a mutually agreed upon date. After the submittal materials have been supplemented and provided to the city, the city manager or designee shall provide written notice that either the materials are complete or notice that the materials are incomplete and that identifies any deficiency by a mutually agreed upon date. After the submittal materials are deemed complete, the city manager or designee shall notify Operator in writing. Operator shall provide the most up-to-date submittal materials to COGCC prior to the Director's Recommendation of Operator's concurrent COGCC Application pursuant to COGCC Rule 306.

7. City Review and Decision on Compliance with Standards and Requirements

- (1) Referral. Once the city manager has issued a completeness determination, the city manager or designee(s) may send a copy of the submittal materials to consultants and any local, state, or federal agency that may have expertise or an interest in impacts that may be associated with the oil and gas operation.
- (2) City Manager Determination. Within a reasonable time, the city manager or designee(s) shall review the complete submittal materials and the referral comments, if any, to determine whether the Operator has demonstrated satisfactorily that the oil and gas

operation will be conducted in accordance with the Standards in Exhibit B and all other applicable requirements. The city manager shall notify the Operator in writing of the determination within 5 business days following the determination. The city manager or designee(s) shall approve in writing the operations allowed by this Agreement when he determines that the Operator has demonstrated satisfactorily that such operations will be conducted in accordance with the Standards in Exhibit B and other applicable requirements, such approval not to be unreasonably withheld. If the city manager or designee(s) determines the Operator has not demonstrated that the operations will be conducted in accordance with the Standards in Exhibit B and all other applicable requirements, the city manager shall issue a decision in writing to informing Operator that the city manager does not find the then-current submittal materials and referral comments, if any, to satisfactorily demonstrate that the operations will be conducted in accordance with the Standards in Exhibit B and other applicable requirements and identifying the reasons for such assessment. Operator shall promptly address the reasons identified in the city manager's assessment and, if necessary, correct, supplement, or modify, submittal materials, by a mutually agreed upon date. The city manager or designee(s) will promptly review the additional information submitted by Operator and render in writing a new decision within 15 days consistent with this paragraph determining whether the Operator has demonstrated satisfactorily that such operations will be conducted in accordance with the Standards in Exhibit B and other applicable requirements. So long as the Operator demonstrates compliance with the Standards in Exhibit B and other applicable requirements, the city manager or designee(s) has no discretion to deny the operations allowed by this Agreement.

- (3) Operator shall provide the city manager's determination, if any, and the most up-to-date submittal materials to the COGCC with the Oil and Gas Development Plan ("OGDP") application, which shall be received by COGCC prior to the Director's consideration of their Recommendation under COGCC Rule 306.
- (4) Revisions to the OGDP or other City Approvals. The Operator shall provide written notice to the City prior to implementing any revisions to the approved OGDP or other plans for meeting the requirements of this Agreement, the Code, and COGCC rules and regulations.
 - a) If the city manager, or designee determines that the revision is a minor revision, the city manager will notify the Operator in writing that the revision is acceptable to the City. "Minor revision" means an insignificant revision that does not increase by more than a de minimis nature the nature or intensity of the impacts of the operation such as change in brand or model of equipment or other change in the operation that will not result in non-compliance with this Agreement and other City approvals issued hereunder. A change required to comply with state or federal law is also a "minor revision."
 - b) If the city manager, or designee deems that the revision is not a minor revision, he will request that the Operator submit materials that he deems are reasonably necessary to determine whether the Operator has demonstrated satisfactorily that such revisions to the operation will be conducted in accordance with the

Standards in Exhibit B and other applicable City requirements. The city manager will review the materials and approve or deny the revision under the process set forth in section 7(2), above, City Manager Determination.

8. Coordination with COGCC Application

- (1) At the time the Operator files any COGCC Form 2A, 2, 2B, 2C and OGD, the Operator shall provide the City a copy of such filings and shall provide the City with notification of any final COGCC decision with respect to any COGCC Form 2A, 2, 2B, 2C and OGD and Operator's best estimate as to when the Construction Phase for such New Well or Location will begin.
- (2) As soon as possible after the Director's recommendation to the COGCC, the Operator and the City shall confer to identify and resolve any inconsistencies between the materials considered for the Director's recommendation and the City's approvals, if any. In case of any unresolvable inconsistency between the materials considered for the Director's recommendation to the COGCC and the City's approvals, the more stringent requirement shall control, provided they are not affirmatively prohibited by COGCC or another regulator.
- (3) As soon as possible after the COGCC's OGD approval, the Operator and the City shall confer to identify and resolve any inconsistencies between the COGCC's OGD approval and the City's approvals. In case of any unresolvable inconsistency between the approved OGD and the City's approvals, the more stringent requirements shall control, provided they are not affirmatively prohibited by COGCC or another regulator.
- (4) Within ten (10) business day after COGCC has approved the OGD, the Operator shall provide the city manager with written notice of the final COGCC decision on the OGD including any revisions and/or conditions of approval imposed by the COGCC.
- (5) No less than 15 days prior to commencing construction, drilling operations, completions operations, and production operations, the Operator shall provide the city manager with written notice.
- (6) The Operator shall provide as-built drawings to the city manager as soon as they can be reasonably prepared following construction of any phase.

9. Compliance with City Requirements

- (1) Standards. The Operator agrees to comply with the Standards listed on Exhibit B and other applicable City Code requirements for all New Wells at the Location. This Agreement and the Standards listed on Exhibit B hereto shall be submitted to the COGCC and made conditions of the permit at the discretion of the COGCC. The Parties agree that the Standards meet or exceed the requirements of Article X, Chapter 18 of the Code. The Parties further recognize that many Standards exceed the requirements of state law.

- (2) Plans and Studies. The Operator's compliance with the plans and studies is a condition of both this Agreement and any City approvals or permits issued hereunder. The plans may be amended if mutually agreed to by city manager or his designee(s) and Operator or if amendment is required to bring the plans into compliance with applicable local, state or federal law.

10. Notice of Oil and Gas Development Plan

Operator shall provide notice of the Operator's Oil and Gas Development Plan to all residential building unit owners and tenants located within one-half (1/2) mile of the Location's Working Pad Surface, as that term is defined by the COGCC. Notice to tenants may be accomplished by sending the notice to the residences addressed to "Current Resident." Operator shall use the most current list of property owners on file with the county assessor for purposes of determining the names and addresses of those to be noticed. Notice will be provided 60 days prior to the scheduled COGCC hearing date on the OGD application.

11. Development Schedule

The Operator will provide a summary of planned operations and an associated operational timeline to the City. Upon request from the City, Operator will provide to the City an updated summary of planned operations and associated operational timelines, with any such requested updates to occur no more frequently than on a quarterly basis.

12. Effect of this Agreement

- (1) The Operator shall not be required to obtain from the City any oil and gas permits under Chapter 18, Article X of the Code for the operations subject to this Agreement, as long as the Operator complies with the terms and conditions contained herein.
- (2) So long as the Operator complies with the terms and conditions of this Agreement, (i) the City agrees that it shall not protest, request a hearing, oppose or otherwise object in any forum to any permits, applications or similarly related approvals related to the Operator's oil and gas operations subject to this Agreement, and (ii) the City shall timely process any additional land use or other necessary approvals requested by Operator related to the oil and gas operations subject to this Agreement.

13. Inspections

- (1) Right to inspect. The city may inspect and monitor all oil and gas operations for compliance with this Agreement and other applicable requirements. By entering into this Agreement, the Operator grants consent to such inspections.
- (2) Right to enter. Duly authorized City personnel or contractors may enter onto the operator's property for purposes of inspections in accordance with Section 13(1) upon a minimum three days' notice (or less for emergencies requiring emergency response personnel to take emergency response action) to the operator.
- (3) Operator contact. The operator shall provide the telephone number and email address of a contact person who may be reached 24 hours a day for purposes of being notified

of any proposed city inspection under this section. City personnel or contractors shall be accompanied by a representative of the Operator prior to entry unless there are emergency circumstances requiring emergency response personnel to take emergency response action and/or an Operator representative is not available.

- (4) Denial of entry to operator's property for inspections. If entry is denied, the city may initiate the process to revoke authorization to conduct oil and gas operations pursuant to Section 18-888 of the Code, initiate termination of this Agreement, or obtain an order from a court of competent jurisdiction to obtain entry to the Operator's property.

14. Insurance.

Operator agrees to provide insurance under the conditions, and in the amounts, set forth in Exhibit D.

15. Financial Assurance

The Operator shall provide financial assurance as required by Section 18-889 of the Code to guaranty compliance with the City's fire codes, building codes, conditions of approval imposed pursuant to this Agreement and other applicable provisions of the Code. The amount of financial assurance will be \$1,500,000 from the beginning of construction operations through the time all New Wells on the location enter production operations. After all New Wells on the location enter production operations, the amount of required financial assurance shall be \$250,000 for the remainder of the life of the Agreement. The form of financial assurance to the City shall be either a letter of credit, a cash bond, or a surety bond, at Operator's discretion.

In addition,

Operator shall notify the City within five days of any of the following events:

- Operator appointing or suffering appointment of a receiver or trustee over its property; or
- Operator filing a petition under any bankruptcy or insolvency act or has any such petition filed against it which is not discharged within 90 days of the filing thereof.

16. Plugging and Abandonment of Wells and Decommissioning of Legacy Equipment

In accordance with state law and this Agreement, Operator shall plug and abandon all wells shown on Exhibit C ("P&A Wells"). Additionally, where Operator owns gas gathering pipeline infrastructure shown on Exhibit C ("Decommissioned Legacy Equipment"), Operator will use best efforts to secure permission from the relevant surface owners to abandon and remove or decommission in place, such Decommissioned Legacy Equipment.

- (1) The Operator shall properly drain and abandon all flowlines and pipelines associated with each P&A Well in accordance with applicable law and shall remove flowlines related to the P&A Wells. The plugging and abandoning of P&A Wells and the decommissioning of legacy equipment shall commence as soon as practicable, but not later than 90 days, following commencement of production from a New Well at the Location. While other legacy equipment may be decommissioned in place, flowlines shall not be abandoned in place, they must be removed.
- (2) The Operator shall conduct soil and, if encountered, groundwater testing after plugging and abandoning the P&A Well and submit the results to the City. The Operator shall

remediate any contamination identified by said soil and groundwater tests pursuant to COGCC regulations.

- (3) The Operator agrees that any P&A Well that Operator plugs and abandons, either before, on or after the Effective Date, may not be re-entered by Operator.

17. Force Majeure

Neither Party will be liable for any delay or failure in performing under this Agreement in the event, and to the extent, that the delay or failure arises out of causes beyond a Party's control, including, without limitation, war, civil commotion, act of God, moratorium, ban, governmental act, pandemic, strike or other stoppage (whether partial or total) of labor, any law, decree, regulation or order of any government or governmental body (including any court or tribunal), or inability to obtain permits, licenses, consents, easements, or rights of way, despite a Party's commercially reasonable efforts to fulfill its obligations under this Agreement. For purposes of this paragraph, the requirement that a Party exercise commercially reasonable efforts to fulfill its obligations includes using commercially reasonable efforts to anticipate any potential Force Majeure and commercially reasonable efforts to address the effects of any Force Majeure as it is occurring and following the potential Force Majeure, such that delay, and any adverse effects of the delay are minimized to the greatest extent possible. For purposes of this Agreement, a "Force Majeure" event does not include the financial inability, for any reason, to perform an obligation. A Party who asserts a claim of Force Majeure shall take all commercially reasonable measures to minimize the effects of such Force Majeure occurrence upon the Party's obligations under this Agreement. If any event occurs or has occurred that may cause a delay or failure in performance of an obligation under this Agreement for which a Party intends to assert a claim of Force Majeure, such Party shall give timely and reasonably detailed written notice and explanation to the other party of the Force Majeure event. It is agreed that, upon the affected Party giving such notice to the other Party, the obligation of the Party giving such notice, so far as it is affected by such condition or event, shall be suspended and any time periods shall be extended for a period equal to the period of the continuance of the Force Majeure event or condition.

18. Authority to Execute Agreement

Each Party represents that the undersigned individuals have the full right and authority to enter into this Agreement and bind the Parties to the terms and conditions contained herein. This Agreement may be amended only by an instrument executed by both Parties.

19. Assignment

This Agreement may be assigned to Parent or another of Parent's wholly owned subsidiaries at Operator's discretion following written notice to the City and provided the assignee assumes all obligations under this Agreement prior to the assignment. Otherwise, this Agreement may be assigned to another operator only with the prior written consent of the City Manager and upon a showing to the City that the Assignee has the financial, technical, and legal capability to comply with all conditions and applicable provisions of the Agreement and all governing laws and regulations. Any assignment shall be on a form approved by the City and shall not be unreasonably withheld.

20. Successors and Assigns

The terms and conditions of this Agreement shall bind and extend to the City and the

Operator, and the Operator's successors and assigns, and the Operator shall require any successor and assign, by written agreement, to adhere to all terms and conditions of this Agreement, and to expressly assume the defense and indemnity obligations to the City as set forth herein in a document acceptable in form to the City. Such assignment shall not relieve the assignee of any obligations that accrued during the period of operation of the assignee or otherwise arising out of the actions or inactions of the assignee during its period of operation.

21. No Third -Party Beneficiaries

This Agreement is not intended to, and does not create any right, benefit, responsibility, or obligation that may be enforced by any non-party, except that nothing herein shall be construed as preventing the COGCC from executing its enforcement authority. Additionally, nothing in the Agreement shall entitle any third party to any claims, rights, or remedies of any kind.

22. Notices

All notices and other correspondence related to this Agreement shall be in writing and shall be delivered by: (i) electronic mail, and (ii) certified mail with return receipt, or by hand delivery with signature or delivery receipt provided by a third-party courier service (such as FedEx, UPS, etc.) to the designated representative of the Party as indicated below. A Party may change its designated representative for notice purposes at any time by written notice to the other Party. The initial representatives of the Parties are as follows:

City: City of Thornton
9500 Civic Center Drive Thornton,
CO 80229 Attn: City Manager
Telephone: 303-538-7002
Emails: CityAtty@ThorntonCo.gov
Citymanager@ThorntonCo.gov

Operator: Extraction Oil & Gas, Inc.
555 17th Street, Suite 3700
Denver, CO 80202
Attn: Legal Department
Telephone: 303-293-9100
Email: legal@civiresources.com

23. Breach

If either Party notifies the other Party that it is in breach of the terms of this Agreement, including the attached Exhibits, such Party in alleged breach shall respond in writing to the notice of alleged breach within seven (7) calendar days and shall have a period of thirty (30) calendar days from the date of the notice of alleged breach in which to remedy the alleged breach. If the alleged breach is of a nature that cannot be remedied within that 30-day period, such Party in alleged breach shall have commenced to remedy the breach and work diligently to complete the remedy.

If the Party in alleged breach fails to acknowledge that a breach has occurred or is occurring

within seven (7) calendar days of the notice of alleged breach, the Parties shall meet to resolve the matter described in the notice. If resolution of the matter cannot be achieved at the meeting, or, if either Party believes that the dispute will not otherwise be resolved in a sufficiently prompt and effective manner, or if either Party determines that action is necessary for the protection of health, safety, welfare or the environment, such Party may, at its discretion, take such legal action and seek such legal or equitable remedies as it determines to be appropriate or necessary to protect and enforce its rights under this Agreement. Such remedies may include, without limitation, an injunction to stop an alleged violation or an order requiring the performance by the other Party, or other remedies permitted under law or this Agreement, including the City's pursuit of revocation of authorization to conduct oil and gas operations as set forth in Article X, Division 7, Sec. 18-888 of the Thornton City Code.

Nothing in the above paragraphs shall be construed as delaying or limiting emergency responses in accordance with the Emergency Response Plan or as delaying or limiting the City's enforcement authority as established by Sections 18-885 to 18-888 of the Thornton Code and paragraph 27 of this Agreement.

24. Defense and Indemnity

Operator agrees to defend and indemnify the City, its employees, boards, agents and City Council (collectively "City Entities") from and against all claims and liability against the City Entities arising out of or related to the operations of the Operator at the Location and any action or inaction of the Operator at or in connection with the Location, including but not limited to claims for bodily injury, death, property or other damage, remediation or other costs, or claims under any local, state or federal environmental law. This defense and indemnity does not apply to a claim or liability that arises from the negligence or willful misconduct of the City Entities. The obligations of this paragraph shall survive the termination of this Agreement.

25. Integration Clause

This Agreement, along with all exhibits attached, hereto encompass the entire agreement of the Parties and, except as otherwise provided herein, supersedes all previous understandings and agreements between the Parties, whether oral or written.

26. Governing Law

This Agreement shall be governed and construed in accordance with all applicable law, including the Thornton City Code, the laws of the State of Colorado.

27. Enforcement

The Parties understand and agree that a violation of any provision of this Agreement or approval issued hereunder is a violation of the Code subject to enforcement under Sections 18-885 through 18-888 of the Code. The Parties understand and agree that the Operator must comply with all applicable state and federal regulations and that such compliance is a condition of the approvals issued under this Agreement. If, any noncompliance or alleged noncompliance with state and federal regulations is not enforced through state and federal measures, the City may pursue its own enforcement action. Nothing herein prevents the City from enforcing terms of this Agreement or approvals issued hereunder that are different from, or more stringent than, applicable state and federal law.

28. Prospective Regulations

The City reserves the right in the future to enact and apply prospectively regulations that are general in nature and applicable to all oil and gas and other industrial operations in the City. However, such regulations shall not be applied to stop or materially hinder (including financially), or adversely affect the operations contemplated by this Agreement.

29. Severability

- (1) If any part of this Agreement is found to conflict with applicable laws, such part shall be inoperative, null and void insofar as it conflicts with such laws; however, the remainder of this Agreement shall be in full force and effect.
- (2) If any part of this Agreement would otherwise be unenforceable or in conflict with applicable laws due to the term or period for which such part is in effect, the term or period for which such part of this Agreement shall be in effect shall be limited to the longest period allowable which does not cause such part to be unenforceable or in conflict with applicable laws.
- (3) If any section, paragraph, provision, or portion thereof of this Agreement is held by any Court to be void and/or unenforceable for any reason, such section, paragraph, provision, or portion thereof shall be excised from the Agreement and shall be replaced with terms and provisions that are most consistent with, and which reflect, the Parties' intention. All remaining sections, paragraphs, provisions, or portions thereof shall remain in full force and effect.

30. No Presumption

The Parties to this Agreement and their attorneys have had a full opportunity to review and participate in the drafting of the final form of this Agreement. Accordingly, this Agreement shall be construed without regard to any presumption or other rule of construction against the Party causing the Agreement to be drafted.

31. Amendments

No changes, alterations, or modifications to any of the provisions set forth in this Agreement shall be effective unless contained in a written agreement signed by both Parties.

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed by a duly authorized representative on the day and year first written above.

THE REMAINDER OF THIS PAGE INTENTIONALLY LEFT BLANK

EXTRACTION OIL & GAS, Inc.
a Delaware corporation

By: _____
Name: Matt Owens
Title: Chief Operating Officer

STATE OF COLORADO)
)ss
COUNTY OF _____)

The foregoing instrument was acknowledged before me this _____ day of _____, 2022, by [name and title of person, company name].

WITNESS my hand and official seal.

My commission expires: _____.

Notary Public

CITY OF THORNTON, COLORADO
a municipal corporation

Kevin S. Woods, City Manager

ATTEST:

Kristen N. Rosenbaum, City Clerk

APPROVED AS TO FORM:

Tami Yellico, City Attorney

List of Exhibits

Exhibit A – Map of the Location

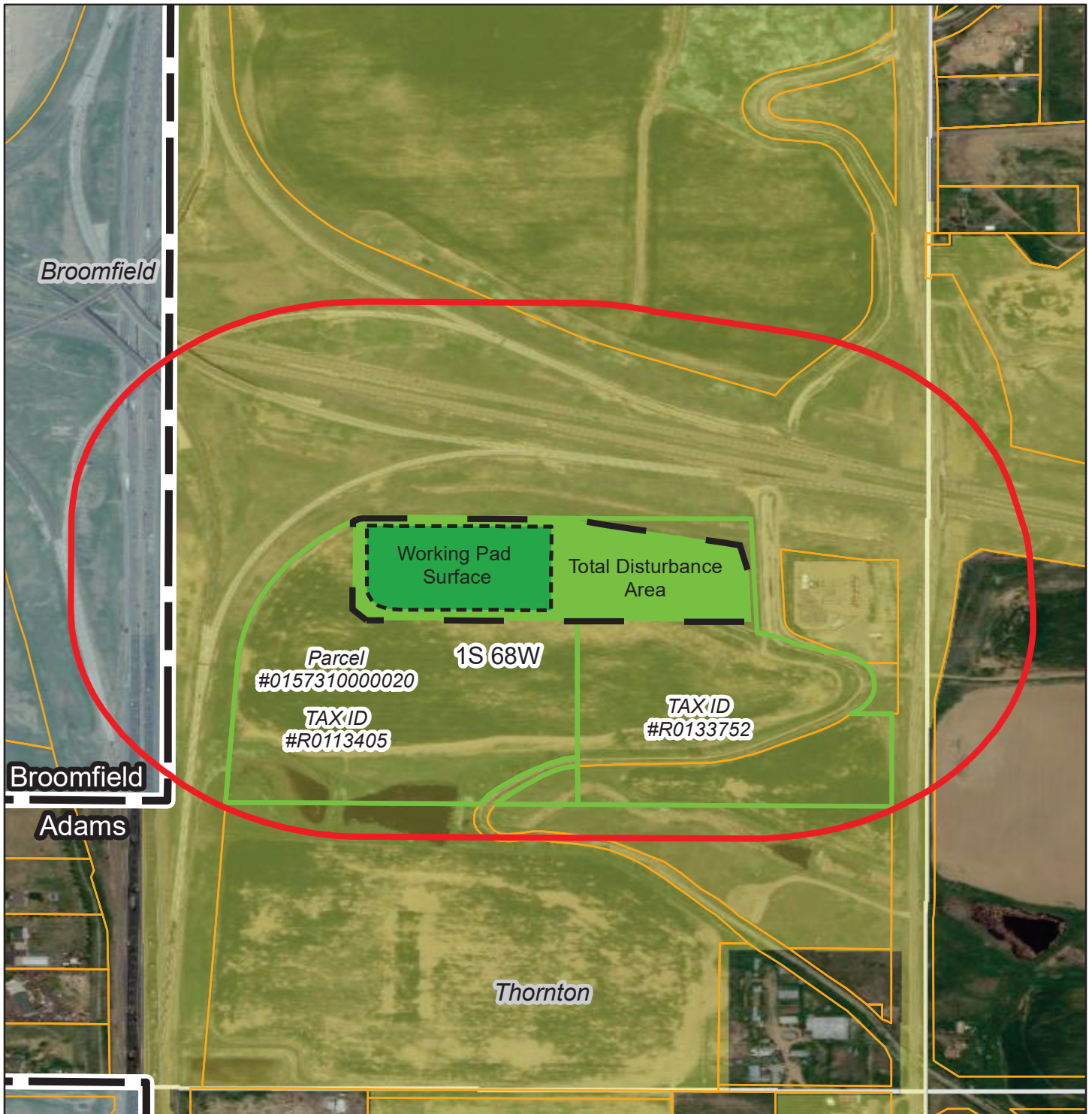

Exhibit B – Standards for New Wells

Exhibit C – List of P&A Wells and Decommissioned Legacy Equipment

Exhibit D – Insurance Requirements

24927943.1









Exhibit A - Map of the Location

Washington Pad
1S-68W-Sec 10
Adams County, CO

Scale: 1:6,000	PRJ: GCS NAD83
Date: 6/15/2022	Author: ECP

Legend

-  Working Pad Surface
-  Allowable Disturbance Area
-  1,000' Pad Setback
-  Washington West Pad Parcel
-  County Parcel
-  County Boundary
-  Broomfield
-  Thornton


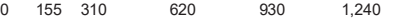
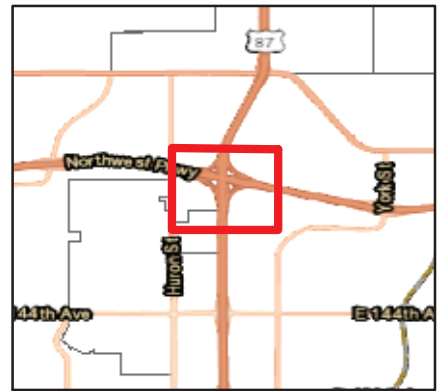




EXHIBIT B

STANDARDS FOR NEW WELLS

Operator shall submit this Exhibit B to its Oil and Gas Development Plan application submitted to the Colorado Oil and Gas Conservation Commission (“COGCC”) relating to the Location. The Standards in this Exhibit B shall apply to all New Wells drilled by the Operator at the Location while this Agreement is effective. All references to the “Agreement” or “Operator Agreement” reference the Oil and Gas Operator Agreement dated _____, 2022 by and through Extraction Oil & Gas, Inc. and the City of Thornton, Colorado.

1. Air Quality

Operator must eliminate, capture, or minimize all potentially harmful emissions and minimize dust associated with onsite activities and traffic on access roads pursuant to the terms of this Agreement. Operator shall comply with all applicable state and federal regulations including regulations promulgated by CDPHE (Colorado Department of Public Health and Environment), COGCC and US EPA (Environmental Protection Agency).

(1) Minimization of emissions

To protect air quality, the following will be required:

- a) The use of electric equipment and line power, as detailed in Standard 13 of this document.
- b) The Operator shall use Tier IV (or better) fracturing pumps, unless otherwise agreed to in writing by the City and the Operator.
- c) Comply with traffic provisions set forth in the Transportation Plan provided with the submittal materials.
- d) The utilization of pipelines pursuant to Standard 42.
- e) Any combustion device, auto ignition system, recorder, vapor recovery device or other equipment used to meet the hydrocarbon destruction or control efficiency requirement shall be installed, calibrated, operated, and maintained in accordance with the manufacturer’s recommendations, instructions, and operating manuals.
- f) No use of glycol dehydrators.
- g) No use of desiccant gas processing dehydrators.
- h) Year-round application of odor requirements pursuant to COGCC and CDPHE regulations, utilization of IOGP Group III drilling fluids for odor mitigation, and compliance with odor requirements set forth in Standard 32.
- i) Reduction or elimination of emissions of associated gas from hybrid gas-oil wells (i.e., gas that is co-produced from a well that primarily produces oil), including prohibition of uncontrolled venting.
- j) Installation of artificial lift capability as needed during construction phase.
- k) Compliance with dust suppression techniques set forth in Standard 19.

- l) Consolidation of product treatment and storage facilities within the Location.
 - m) Centralization of compression facilities within the Location.
 - n) Telemetric control and monitoring systems, including surveillance monitors to detect when pilot lights on control devices are extinguished.
 - o) Operator will comply with all CDPHE air permits, if any, and will comply with all OSHA work practice requirements with respect to benzene.
 - p) Flaring shall be eliminated or minimized to the maximum extent practicable.
 - q) Exhaust from all engines, motors, coolers, and all other equipment must be vented up and away from nearest residences.
 - r) Operator agrees to participate in Natural Gas STAR or other voluntary programs to encourage innovation in pollution control at the Location.
 - s) Use of a pressure-suitable separator and vapor recovery unit (VRU) where applicable.
 - t) Pipeline infrastructure will be constructed prior to the Production Phase
- (2) Leak Detection and Repair
- a) Operator shall develop and maintain an acceptable leak detection and repair (“LDAR”) program as required by CDPHE using approved instrument monitoring methods (AIMM) for equipment on the Location.
 - b) AIMM and AVO (Audio Visual Olfactory) inspections of existing wells, related facilities, and equipment will be performed monthly. Documentation of inspections and video footage will be available to Thornton upon request.
 - c) LDAR inspections to commence during the drilling phase.
 - d) Operator will install and maintain a sophisticated 24-hour automation system that enables specialized on-pad sensors as well as remote personnel to close facility valves and wellheads that disable (shut-in) systems as a preventative leak measure. Operator will communicate with the fire department if upset conditions, or operational procedures related to upset conditions, have the potential to result in any unusual audio, visual, or olfactory observations off Location.
 - e) Operator will notify the City of reportable safety events under COGCC Rule 602.g., including but not limited to, Grade 1 Gas Leaks.
- (3) The Operator shall conduct pre-production and early production ambient air monitoring as required by Colorado Regulation 7.
- (4) Operator shall respond to air quality Action Day advisories relating to ozone posted by the Colorado Department of Public Health and Environment for the Front Range Area by implementing their suggested air emission reduction measures as feasible.
- a) Emission reduction measures shall be implemented for the duration of an ozone air quality Action Day advisory and may include measures such as:

- Minimize vehicle and engine idling.
- Reduce truck traffic and miles traveled.
- Delay vehicle refueling.
- Suspend or delay use of fossil fuel powered ancillary equipment
- Suspend well maintenance activities

b) Within 30 days following the conclusion of each annual Air Quality Action Day season, Operator must submit a report to the City that details which measures it implemented during any Action Day advisories.

(5) The Operator is required by Colorado law to submit a variety of compliance and emission inventory reports. When such reports are finalized or approved by the applicable state regulator, they will be available to the City upon request. The Operator will also provide the City with a copy of any self-reporting submission that Operator provides to the applicable state regulatory due to any incidence of non-compliance with applicable regulations at the location.

- a) The Operator must submit an annual report to the City, no later than March 31 each year certifying 1) compliance with these air quality requirements and documenting any periods of material non-compliance, including the date and duration of each such deviation and a compliance plan and schedule to achieve compliance, and 2) That the equipment at the Location continues to operate within its design parameters, and if not, what steps will be taken to modify the equipment to enable the equipment to operate within its design parameters.
- b) The annual report must contain a certification as to the truth, accuracy, and completeness of the reports, signed by a responsible corporate official. The Operator may satisfy this reporting obligation in whole or in part by submitting all AQCC (Air Quality Control Commission) Regulations No. 7 annual reports for the prior calendar year to the City and supplementing them as needed to meet these reporting requirements for covered facilities within the City.
- c) The Operator will also provide the City a copy of any self-reporting submissions that Operator provides to the CDPHE due to any incidence of non-compliance with any CDPHE air quality rules or regulations at the Location.

2. Anchoring

All New Well equipment at the Location shall be anchored to the extent necessary to resist flotation, collapse, lateral movement, or subsidence in compliance with applicable Federal Emergency Management Agency (FEMA) (as administered by the City) and COGCC rules and regulations.

3. Burning

No open burning shall occur on the Location.

4. Chains

Traction chains from heavy equipment shall be removed before entering a City street.

5. Chemical Disclosure and Storage

- (1) All fracturing chemicals must be disclosed to the City pursuant to the process set forth below before bringing them on site. Prior to the bringing of such chemicals onto the property, the Operator shall make available to the City, in table format, the name, Chemical Abstracts Service (CAS) number, storage, containment and disposal method for such chemicals to be used on the Location, which the City may make available to the public as public records.
- (2) Fracturing chemicals shall be uploaded into the Chemical Disclosure Registry in accordance with COGCC Rule 208.
- (3) The Operator shall not permanently store fracturing chemicals, flowback from hydraulic fracturing, or produced water in the City limits. Operator shall remove all hydraulic fracturing chemicals at the Location within thirty (30) days following the completion of hydraulic fracturing at the Location.
- (4) In addition to any substances that are not permitted to be used in accordance with state or federal rules or regulations in place from time to time, the following chemicals shall not be utilized in hydraulic fracturing fluid at the Location:

Ingredient Name	CAS #
Benzene	71-43-2
Lead	7439-92-1
Mercury	7439-97-6
Arsenic	740-38-2
Cadmium	7440-43-9
Chromium	7440-47-3
Ethylbenzene	100-41-4
Xylenes	1330-20-7
1,3,5-trimethylbenzene	108-67-8
1,4-dioxane	123-91-1
1-butanol	71-36-3
2-butoxyethanol	111-76-2
N,N-dimethylformamide	68-12-2
2-ethylhexanol	104-76-7
2-mercaptoethanol	60-24-2

benzene, 1,1'-oxybis-, tetra propylene derivatives, sulfonated, sodium salts (BOTS)	119345-04-9
butyl glycidyl ether	8/6/2426
polysorbate 80	9005-65-6
quaternary ammonium compounds, dicoco alkyldimethyl, chlorides (QAC)	61789-77-3
bis hexamethylene triamine penta methylene phosphonic acid (BMPA)	35657-77-3
diethylenetriamine penta (methylene-phosphonic acid) (DMPA)	15827-60-8
FD&C blue no. 1	3844-45-9
Tetrakis(triethanolamino) zirconium (IV) (TTZ)	101033-44-7

6. Closed-Loop Pit-less Systems for the Containment and/or Recycling of Drilling Fluids

Wells shall be drilled, completed, and operated using closed-loop pit-less systems for containment and/or recycling of all drilling, completion, flowback and produced fluids. Operator shall recycle fluids to the maximum extent practicable, with the understanding that Operator is limited in its ability to recycle all fluids, as doing so would necessitate the use of permanent tanks, which is otherwise prohibited by the terms of the Agreement, and result in the potential for additional emissions. Operator shall not store waste onsite for periods longer than 30 days.

7. Color

Permanent facilities shall be painted in a uniform, non-contrasting, non-reflective color, to blend with the surrounding landscape (with colors that match the land rather than the sky). If the City desires a specific color or colors, it shall notify Operator of such color or colors prior to construction of the Location and, to the extent possible, Operator shall utilize such color or colors.

8. Combustion Devices

To the extent that thermal oxidizers, or combustion devices are utilized for maintenance activities, all such devices shall be designed and operated as follows:

- (1) The device must be fired with natural gas and designed to operate with a 98% or higher hydrocarbon destruction efficiency.
- (2) The device must be designed and operated in a manner that will ensure no visible emissions during normal operation. Visible emissions mean observations of smoke for any period or periods of duration greater than or equal to one (1) minute in any fifteen

(15) minute period during normal operation, pursuant to EPA Method 22. Visible emissions do not include radiant energy or water vapor.

(3) All combustion devices must be equipped with an operating auto-igniter.

9. Containment Berms

The Operator shall utilize steel-rim berms around all permanent facility equipment at the Location with sufficient capacity to contain 1.5 times the maximum volume of liquids that such facility will contain at any given time plus sufficient freeboard to prevent overflow. All berms and containment devices shall be inspected quarterly by the Operator and maintained in good condition. No potential ignition sources shall be installed inside the secondary containment area unless the containment area encloses a fired vessel, or such sources are rated in accordance with industry codes and standards. Secondary containment such as duck ponds or lined earthen berms for temporary tanks shall also be used. Permanent containment berms shall be constructed of steel rings, designed, and installed to prevent leakage and resist degradation from erosion or routine operation. Secondary containment for tanks shall be constructed with a synthetic or engineered liner that contains all primary containment vessels and is mechanically connected to the steel ring to prevent leakage. 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.

10. Cultural and Historical Resource Protection

Prior to commencing surface disturbance activities, Operator will complete a site assessment assessing whether there are any historical or cultural sites at the Location. If a significant surface or sub-surface archaeological site is discovered prior to or during construction, the Operator shall be responsible for immediately contacting the City to report the discovery. If any disturbance of a site deemed by the State Historic Preservation Office to be a historical or cultural resource occurs, the Operator shall be responsible for mitigating the disturbance to the cultural or historical property through a data recovery plan in consultation with the City.

11. Cumulative Impacts

(1) After all New Wells at the Location enter the Production Phase, Operator will review the Cumulative Impacts Plan provided in Section 4.A.(4).z of the Agreement. The Operator will annually evaluate the following requirements of the Plan and provide an updated plan to the city manager if information has changed.

- a) Description of all resources to which cumulative adverse impacts are expected to be increased.
- b) Description of specific measures taken to avoid or minimize the extent to which cumulative adverse impacts are increased.
- c) Description of all measures taken to mitigate or offset cumulative adverse impacts to any of the resources.
- d) Any additional information that was determined to be reasonable and necessary to the evaluation of cumulative impacts by the Operator, the Director, CDPHE, CPW (Colorado Parks and Wildlife), or the Relevant Local Government at the time of approval by COGCC.

12. Discharge Valves

Open-ended discharge valves on all storage tanks, pipelines and other containers at the Location shall be secured and shall not be accessible to the general public. Open-ended discharge valves at the Location shall be placed within the interior of the secondary containment area.

13. Electric Equipment

The production rig used during the Drilling Phase and all permanent production equipment, such as compressors, motors, and pump jacks, shall utilize electric line power to mitigate noise and to reduce emissions.

14. Exhaust

The exhaust from all stationary or permanent engines, motors, coolers, and other mechanized equipment shall be vented up or in a direction away from the nearest occupied building.

15. Fencing

Permanent perimeter security fencing shall be installed around the pad after interim reclamation has been completed. The main purpose of fencing is to deter entrance by unauthorized people. Operator shall have the right to utilize an automated gate to restrict ingress and egress to Location provided the gate is fitted with a Knox Master Key and associated entrance device(s) to provide first responders with access necessary for emergency response.

16. Fires and Explosions

Any incident or natural event involving a fire, explosion or detonation requiring deployment of fire suppressing materials from the fire department shall be reported to the City within 24 hours. In such event, a subsequent report shall be submitted to the City which shall include the following specifics, to the extent available:

- Fuel source
- Location
- Proximity to residences and other occupied buildings
- Cause
- Duration
- Specifics and degree of damage to properties, if any, beyond the Location.
- Injuries to person(s)
- Emergency management response; and
- Remedial and preventive measures to be taken within a specified amount of time

The Operator shall provide the City with an additional report containing the information above after the conclusion of the accident or natural event if lasting more than 24 hours.

17. Flammable Material

All ground within twenty-five (25) feet of any tank, or other structure containing flammable or combustible materials, shall be kept free of dry weeds, grass, or rubbish, and shall conform to COGCC 600 series Safety Regulations and the applicable Fire Code.

18. Flowlines

- (1) At the request of the City, Operator will provide to the City all records required to be submitted to State agencies related to inspections and pressure testing. Operator will provide to the City all records required to be submitted to State agencies relating to accidents and other safety incidents related to flowlines at the Location.
- (2) All new flowlines and pipelines operated by Operator and associated with the Location shall have the legal description of the flowlines' and pipelines' location recorded with the Clerk and Recorder of the City within forty-five (45) days of completion of construction. Abandonment of any recorded flowlines shall be recorded with the Clerk and Recorder of the City within thirty (30) days after abandonment.

19. Fugitive Dust Suppression

Dust associated with on-site activities and traffic on roads shall be minimized throughout construction, drilling and operational activities such that dust emissions are visibly minimized from the Location or its access road to the extent practical given wind conditions. No untreated produced water or other process fluids shall be used for dust suppression. The Operator will avoid creating dust or dust suppression activities within three hundred (300) feet of the ordinary high-water mark of any waterbody unless the dust suppressant is water. Material Safety Data Sheets (MSDS) for any chemical-based dust suppressant, other than magnesium chloride, shall be submitted to the City prior to use.

20. General Maintenance

Operator shall operate and maintain all equipment pursuant to manufacturer specifications consistent with technological limitations and reasonable and customary maintenance practices.

21. Injection Wells

The Operator shall drill no injection wells in the City of Thornton.

22. Landscaping

Operator shall implement the Landscaping and Reclamation Plan approved during the application process for the Location.

23. Lighting

The intent of this provision is to minimize light spillage beyond the perimeter of the Location and for the Operator to take appropriate steps in order to achieve this intent.

- (1) All permanent lighting or lighting higher than a perimeter wall must be downward facing.
- (2) All bulbs must be fully shielded to prevent light emissions above a horizontal plane drawn from the bottom of the fixture.
- (3) Prior to installation of permanent lighting on any facility, the Operator agrees to submit to the City an updated lighting plan and the City shall communicate with Operator any modifications to the plan that it deems appropriate, and Operator shall make such modifications if reasonable or required by law. The updated lighting plan shall indicate the location of all outdoor lighting on the site and any structures and

include cut sheets (manufacturer's specifications with picture or diagram) of all proposed fixtures.

- (4) During the Drilling and Completion Phases, consistent with applicable law, Operator will construct an approximately 32-foot temporary wall around as much of the perimeter of the well pads as operations allow to reduce light escaping from the site, unless shorter walls are mutually agreed to by City and Operator on a site-specific basis.

24. Location

The Operator agrees that it will drill no more than ten (10) wells at the Location set forth on Exhibit A to the Operator Agreement.

For purposes of this Agreement, the phases of operation at the Location shall be defined as follows:

- (1) "Construction Phase" shall mean civil and earth work performed in connection with the construction and installation of drilling pads, visual mitigation measures, access routes, pipelines, and launcher/receiver locations.
- (2) "Drilling Phase" shall mean the period beginning when a drilling rig is utilized to penetrate the surface of the earth with a drill bit and continuing through the installation of well casing and cement at one or more wells.
- (3) "Completion Phase" shall mean the period including hydraulic fracturing, coiling, workover, installation of tubing, flowback and wellbore preparation concluding prior to the initiation of production of from one or more wells.
- (4) "Production Phase" shall mean the period beginning when one or more wells is capable of producing hydrocarbons that flow through permanent separator facilities and into the pipeline gathering system.
- (5) "Multiple Phases" for clarity, it is possible for multiple phases of operation to be occurring at the same time with respect to the Location. Notwithstanding that fact, Operator agrees it will not conduct hydraulic fracturing and drilling operations simultaneously at the Location.
- (6) "Interim reclamation" shall refer to minimization of the footprint of disturbance after the commencement of the production phase to areas reasonably needed for production operations, maintenance, and workover operations.
- (7) "Final reclamation" shall mean the process of returning or restoring the surface of disturbed land as nearly as practicable to its condition prior to the commencement of oil and gas operations or to landowner specifications.

25. Maintenance of Machinery

Routine field maintenance of vehicles or mobile machinery shall not be performed within three hundred (300) feet of any water body. All fueling must occur over impervious material.

26. Mud Tracking

The Operator shall take all practicable measures to ensure that vehicles do not track mud or debris onto City streets. If mud or debris is nonetheless deposited on City streets, in excess

of de minimis levels, the streets shall be cleaned immediately by the Operator. If for some reason this cannot be done, or needs to be postponed, the City shall be notified of the Operator's plan for mud removal.

27. No Use of City Water

Operator shall not use City water for any of its oil and gas operations.

28. Noise Mitigation

- (1) Noise mitigation measures will be constructed around the Location. The noise mitigation measures shall use the most current equipment to minimize noise impact during the Drilling and Completion Phases Operator shall comply with the sound limitation regulations set forth in COGCC Rule 423 Noise Regulations.
- (2) The Operator shall not unload pipe between 8:00 p.m. and 7:00 a.m. The Operator will complete a baseline noise mitigation study at the Location that demonstrates pre-development noise levels, and a copy will be provided to the City.
- (3) During the Drilling and Completion Phases, Operator shall construct a temporary perimeter wall to mitigate noise as appropriate.
- (4) If Operator uses any pumps or engines that are not electrically operated, Operator shall use quiet design mufflers (also referred to as hospital grade or dual dissipative) or equivalent and shall use acoustically insulated housing or covers to enclose the engines or temporary source mitigation devices.
- (5) During pad construction at the Location, the Operator agrees that noise levels shall not exceed those produced by the construction of a typical commercial development. All measurements considered for compliance with this provision shall be taken by a third-party contractor using industry standard equipment and practices.

29. Notices

Notwithstanding anything to the contrary in the Agreement, notices required by this Exhibit B may be accomplished via email

30. Notification to the City Regarding Commencement of Operations

Operator shall provide written notice to the City no less than fifteen (15) calendar days prior to the commencement of any of the following: Construction Phase (unless the Construction Phase commences within 45 days of the approval of the applicable Form 2 or Form 2A), Drilling Phase, Completion Phase, or any recompletion, re-drilling or plugging and abandonment of a New Well. Any notification provided by Operator to the City pursuant to this agreement may be used by the City for public notification.

31. Noxious Weed Control

The Operator shall be responsible for ongoing noxious weed (as defined under State and/or local law) control at the Location and along access roads per City regulations.

32. Odor

Odor emitting from the Location must be controlled. Operator shall prevent, minimize, and mitigate odors from oil and gas operations by proactively addressing and, to the extent possible, resolving complaints, if

any, filed by impacted members of the community, in coordination with the City. Operator must use a filtration system or additives to the drilling and fracturing fluids to minimize odors. Operator is prohibited from masking odors from any oil and gas facility site by using masking fragrances.

33. PFAS-Free Fracturing Fluid

In addition to not utilizing the chemicals listed above in Standard No. 5 in hydraulic fracturing fluid, Operator shall not utilize per- and polyfluoroalkyl substances ("PFAS") in hydraulic fracturing fluid.

34. Reclamation

Operator must submit an oil and gas site reclamation plan 90 days prior to beginning final reclamation activities. Reclamation of the Location not later than six (6) months after plugging and abandoning the last New Well at the Location, weather and surface owner activities permitting.

35. Re-entry

Except as may be necessary to remediate any well integrity issues, the re-entry of a previously plugged and abandoned well within the drilling and spacing unit developed by the Location is not allowed.

36. Regulations

The Parties recognize that the Operator is required to comply with all applicable state and federal regulations independent of and in addition to the terms of this Agreement and the Standards set forth in this Exhibit B. The City agrees that it will not impose any fine on the Operator for violation of this Agreement if the activity or condition that created the violation is also subject to regulation by the COGCC or other regulator or other body.

37. Removal of Debris

After the Construction Phase, all construction-related debris shall be removed from the site for proper disposal. The entire site of the oil and gas operation shall be maintained free of debris and excess materials at all times during operations. Burying debris or any type of excess materials on-site is prohibited

38. Removal of Equipment

All equipment used for drilling, re-completion, and maintenance of the site shall be removed within 30 days of completion of the work. Permanent storage of equipment on Location shall not be allowed other than equipment needed for routine maintenance

39. Stormwater Management

All oil and gas operations at the Location shall comply and conform with the City's stormwater regulations and the current Stormwater Management Plan for the Location.

40. Trailers

No permanent residential trailers shall be permitted at the Location provided, however, that until ninety (90) days following the end of the Completion Phase at the Location, temporary residential and/or security trailers are permitted, as needed for on-site operations, for exclusive use by the Operator's personnel and the personnel of its subcontractors on a temporary basis.

41. Transportation and Circulation

The Operator will comply with all Transportation and Circulation requirements as contained in the City Development Code as may be reasonably required by the City's Traffic Engineer and will comply with all applicable hazardous material regulations. The Operator will obtain necessary access permits.

42. Use of Pipelines

The Operator agrees to build pipelines for the transport of oil, gas, and produced water from the Location and to construct and commission such pipelines at the Location before the Production Phase commences. During the Completion Phase, the Operator will use pipelines for produced water or flowback to the maximum extent feasible. All fresh water supporting hydraulic fracturing shall be transported to the Location by means other than by truck. For avoidance of doubt, Operator shall be authorized to use trucks for purposes of bringing water on location for operations which are not hydraulic fracturing. The Operator's obligation to build and utilize such pipelines is subject to the City granting Operator all necessary right-of-way and the City issuing Operator the necessary permits for the same, as applicable. Operator shall be permitted to utilize temporary tanks during drilling, completion, hydraulic fracturing, workover, and maintenance operations. If requested by the City, Operator will conduct a risk analysis to identify potential risks associated with pipelines and the measures implemented that are intended to mitigate such risks.

43. Wastewater and Waste Management

All fluids shall be contained and there shall be no discharge of fluids. Waste shall be stored in tanks, transported by tanker trucks and/or pipelines, and disposed of at licensed disposal or recycling sites. No land treatment of oil impacted, or contaminated drill cuttings are permitted. The Operator shall not dispose of any wastewater within the City. All other waste shall be disposed of in accordance with state regulations.

44. Water Quality Monitoring

Oil and gas operations shall, to the extent practicable, avoid causing degradation to surface or ground waters within the City and to wetlands within the City, in a manner consistent with the COGCC rules and regulations. If Operator needs to seek a variance from a COGCC provision, then an approved COGCC variance will apply to this Agreement upon notice of such variance from Operator to the City. Additionally, the City may make a water testing program available to any persons with an available water source within one-half (1/2) mile of the radius of the proposed Location. If such sampling shows water contamination, the Operator shall work with the City, COGCC, and/or CDPHE to help identify the source of the contamination.

45. Water Supply

The Operator shall notify the City, upon its request, of the source(s) of water to be used at the Location during the Drilling Phase and Completion Phase and will provide the City with an estimate of the volumes of water to be utilized, with such estimates subject to change. All water volumes actually used by the Operator shall be reported by the Operator to the State of Colorado in accordance with its regulations.

Conceptual List of Wells to P&A

Exhibit C - Conceptual List of the P&A Wells and Decommissioned Legacy

Equipment List of Legacy Wells to P&A

Well Name	API	QQ	Section	Township	Range
Gonzales 1-2	05-001-08844	SWSW	2	1S	68W
Bydalak 1-11	05-001-08368	NENW	11	1S	68W
Shannon MD 14-5	05-001-08842	NWNW	14	1S	68W
Schnieder 1-14	05-001-08381	NESW	14	1S	68W
Schimpf 11-23 (#1)	05-001-08983	NWNW	23	1S	68W

NOTE: The following well was P&A'd in October 2021

Bydalak 2-11	05-001-08881	SESW	11	1S	68W
--------------	--------------	------	----	----	-----

Gas gathering pipeline infrastructure associated with each of the 6 listed legacy P&A within the City of Thornton shall be drained and decommissioned.

EXHIBIT D

Insurance Requirements

During the term of the Agreement, Operator shall comply with the following requirements:

1. Operator shall maintain or cause to be maintained, with insurers authorized by the state of Colorado and carrying a financial strength rating from A.M. Best of no less than A- VII (or a similar rating from an equivalent recognized ratings agency), at a minimum, the following types of insurance with limits no less than the amounts indicated:
 - A. Commercial General Liability insurance on an occurrence-based form including coverage for bodily injury or property damage for operations and products and completed operations with limits of not less than \$2,000,000 each and every occurrence and \$4,000,000 aggregate. Such coverage shall include coverage for explosion, collapse, and underground hazards.
 - B. Automobile Liability insurance with limits of not less than \$1,000,000 each and every occurrence for owned, hired, and non-owned vehicles assigned to the operator.
 - C. Workers' Compensation insurance- Statutory Workers' Compensation Coverage for the employee's normal State of employment/hire, including Employer's Liability insurance, with limits of not less than \$1,000,000 Each Accident, Disease - Each Employee, Disease - Policy Limit.
 - D. Control of Well/Operators Extra Expense insurance with limits of not less than \$10,000,000 covering the cost of controlling a well that is out of control or experiences a blowout, re-drilling or restoration expenses, seepage and pollution damage resulting from an out of control well or blowout as first party recovery for the operator and related expenses, including, but not limited to, loss of equipment and evacuation of residents.
 - E. Umbrella/Excess Liability in excess of General Liability, Employer's Liability, and Automobile Liability with limits no less than \$25,000,000 per occurrence which shall follow form to the underlying liability policies; provided, however, that for so long as the Construction Phase, Drilling Phase or Completion Phase is ongoing, Operator will maintain such insurance with limits no less than \$100,000,000 per occurrence.
 - F. Environmental Liability/Pollution Legal Liability insurance with limits of not less than \$5,000,000 per pollution incident, with coverage being required beginning with the date that is 8 years from the date of first production from the first New Well. Coverage must include gradual pollution events. This insurance may be on an occurrence basis or a claims-made basis; however, the retroactive date must precede the

effective date of the Agreement and earlier as applicable to cover all wells and potential wells subject to the Agreement in order to cover all New Wells and the Location.

2. Operator shall waive and cause its insurers under the above policies to waive for the benefit of the City any right of recovery or subrogation which the insurer may have or acquire against the City or any of its affiliates, or its or their employees, officers or directors for payments made or to be made under such policies.

3. As it pertains to the risks and liabilities assumed by Operator under this Agreement, Operator agrees to add the City and its elected and appointed officials and employees as Additional Insureds under general liability (including operations and completed operations), auto liability and umbrella liability.

4. Operator shall ensure that each of the policies are endorsed to provide that they are primary without right of contribution from the City or any insurance or self-insurance otherwise maintained by the City, and not in excess of any insurance issued to the City.

5. Operator shall ensure that each of the policies above (excluding workers' compensation and OCC/COW) are endorsed to state that the inclusion of more than one insured under such insurance policy shall not operate to impair the rights of one insured against another insured and that the coverage afforded by each insurance policy shall apply as though a separate policy had been issued to each insured.

6. All policies shall be endorsed such that they cannot be canceled or non-renewed without at least 30 days' advanced written notice to the Operator and the City, evidenced by return receipt via United States mail, except when such policy is being canceled for nonpayment of premium, in which case 10 days advance written notice is required. Language relating to cancellation requirements stating that the insurer's notice obligation is limited to "endeavor to" is not acceptable.

7. Operator shall, prior to permit issuance, deliver Certificates of Insurance reasonably acceptable to the City confirming all required minimum insurance is in full force and effect.

8. Deductibles or retentions shall be the responsibility of Operator. Deductibles or retentions must be listed on the Certificate of Insurance required herein and are subject to the reasonable approval of the City.

9. Operator shall require any of its subcontractors to carry the types of coverage and in the minimum amounts in accordance with the requirements set out in Section I.A, 1.B. and 1.C. Operator agrees that it shall be responsible for any damage or loss suffered by the City as a result of non-compliance by Operator or any subcontractor with this section.

10. In the event that Operator's coverage lapses, is cancelled or otherwise not in force, the City reserves the right to obtain insurance required herein and charge all costs and associated expenses to Operator, which shall become due and payable immediately.