

**ADDENDUM to the DECEMBER 1, 2023 DIRECTOR'S RECOMMENDATION:**

***Extraction Oil & Gas Inc, ("Extraction"); Operator Number 10459***

***Washington OGDG (OGDP ID #485238)***

**BACKGROUND**

The Colorado Energy and Carbon Management (ECMC) Director published the Director's Recommendation for the Extraction Oil & Gas Inc ("Extraction") Washington OGDG on December 1, 2023, in advance of the initial noticed hearing date of December 14, 2023. After the publication date, Extraction contacted ECMC Staff with new information regarding the Washington location, including the City of Thornton's Final Determination Letter, three Informed Consent Letters, and the discovery of an active Bald Eagle nest within a quarter of a mile of the proposed location. This new information led to a postponement of the hearing. This Addendum ("Addendum") to the Director's Recommendation describes the new information provided by Extraction, and addresses the variance request submitted by Extraction. No additional revisions will be made to the application prior to the Commission Hearing scheduled for October 23, 2024.

**City of Thornton's Determination Letter**

In accordance with the Operator Agreement with the City of Thornton, Extraction provided ECMC Staff with the Final Determination Letter on December 7, 2023, 6 days after the Director's Recommendation was published. The Operator Agreement can be found on the Form 2A, Document #403277421, labeled as "LOCAL/FED FINAL PERMIT DECISION," and the Final Determination Letter can also be found on the Form 2A, Document #2473690, labeled as "LOCAL/FED FINAL PERMIT DECISION."

**Informed Consent Letters**

Technical review of the proposed Washington OGDG confirmed that there are 3 Residential Building Units (RBUs) within 2,000 feet of the Working Pad Surface (WPS). Extraction submitted the Washington OGDG in February of 2023 with the intent of pursuing approval through Rule 604.b.(3): *Any Wells, Tanks, separation equipment, or compressors proposed on the Oil and Gas Location will be located more than 2,000 feet from all Residential Building Units or High Occupancy Building Units*. After the Director's Recommendation was published on December 1, 2023, Extraction secured Informed Consent from the 3 RBUs within 2,000 feet, and sent them to ECMC Staff on March 19, 2024. ECMC Staff reached out to Extraction to confirm whether they intended on pursuing approval of the Washington OGDG through Rule 604.b.(1): *The Residential Building Unit owners and tenants and High Occupancy Building Unit owners and tenants within 2,000 feet of the Working Pad Surface explicitly agree with informed consent to the proposed Oil and Gas Location*, or Rule 604.b.(3), and Extraction has indicated that they plan to pursue approval of the proposed project through both Rules 604.b.(1) and 604.b.(3). The

3 Informed Consent Letters have been attached, and can be found on the Form 2A, Document #s 2473691, 2473692, and 2473693, labeled as “INFORMED CONSENT LETTER.”

### **Bald Eagle Nest**

The Washington OGDG permit application was submitted to the ECMC on February 2, 2023, and was reviewed under the Colorado Parks and Wildlife (CPW) High Priority Habitat (HPH) map that was in effect at the time of submission. Unless otherwise specified by Rule, OGDG permit applications are reviewed under the Rules that are in effect at the time of submission, this includes the HPH maps in effect at that time, even if map update rulemakings occur while an application is in process. At the time of submission, the two closest HPHs shown on the CPW HPH map were an active Bald Eagle nest approximately 2,600 feet to the northeast of the proposed WPS, and a Burrowing Owl Active Nest HPH approximately 2,950 feet to the northwest of the proposed WPS. In July of 2023, two previously inactive raptor nests were observed approximately 640 feet southeast of the proposed WPS, and on July 18, 2023, Extraction reached out to CPW to initiate conversations regarding the larger of the two nests for any available insight on activity. In September of 2023, eagles were spotted next to the nest for the first time, and in October those eagles were observed conducting nest building and maintenance activities. Extraction initiated conversations with United States Fish and Wildlife Service (USFWS) in November of 2023, and continued conversations with both USFWS and CPW through March of 2024. Discussions included whether or not the eagles were active in the nest, whether there were viable eggs, the planning and timing of the Extraction Washington OGDG, whether Extraction could logistically use an Alternative Location, and all of the mitigation and minimization measures that Extraction could commit to for the project.

In relation to SB 19-181, ECMC adopted the 1200 Series Rules in order to lay the framework for operators to submit applications in areas that may impact wildlife. In the case of the Extraction Washington OGDG application, there were no HPHs within the proposed location and access road areas when the project was submitted to the ECMC, the nest was observed as active after the submission, and the HPH map with the nest did not go into effect until July of 2024. CPW indicated in March of 2024 that although the proposed Washington location was submitted and reviewed under the 2022 HPH maps, that the observed nest would fall under CPW's definition of an Active Nest: *Any nest that is frequented or occupied by a raptor during the breeding season, or which has been occupied in any of the five previous breeding seasons. Many raptors use alternate nests in various years. Thus, a nest site may be active even if a particular structure is not occupied in a given year*, triggering the Rule 1202.c. No Surface Occupancy (NSO) ¼ mile buffer. The observed nest does not fall under CPW's definition of a Highly Developed Area: *An area where existing density from the cumulative development of oil and gas facilities, home sites, subdivisions, commercial buildings, malls, apartment complexes, gravel pit operations, etc., exceed 10 or more daily occupied facilities within ¼ mile (1,320 ft, 400 meters) radius of the nest.*

Bald Eagles are federally protected under the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. Under these acts, the USFWS protects eagles and other migratory birds through conservation and education, and issues and maintains permits that can be obtained to take the eagles (take being defined by the USFWS as pursuing, shooting, shooting

at, poisoning, wounding, killing, capturing, trapping, collecting, or molest or disturb the eagle). The USFWS has indicated that they will not require that Extraction apply for a disturbance take permit, summarizing that the eagle's nest that has been observed was historically a hawk's nest, that the majority of Extraction's project will be outside of a 660 foot ¼ mile buffer, acknowledges that Extraction has committed to mitigation measures and Best Management Practices (BMPs), the area has a number of existing disturbances in proximity to the nest, and that the Eagles in this area have been observed to have a high tolerance for human activity. Additional information regarding the initial discussions between Extraction and the USFWS can be found on the Form 2A, document #2473694, labeled "CORRESPONDENCE." Despite the USFWS not requiring a disturbance take permit, Extraction applied for, and has obtained a disturbance take permit effective September 1, 2024 through August 31, 2025. This permit has been added to the Form 2A, document #2473695, labeled as "OTHER." At the time of this Addendum to the Director's Recommendation, USFWS has not requested any additional information, or changes to Extraction's proposed Washington OGDG.

On July 15, 2024, the 2024 CPW HPH maps went into effect, showing the active Bald Eagle nest (¼ mile buffer) as an HPH. Pursuant to Rule 1202.c which states: *Except as specified pursuant to Rule 1202.c.(2), Operators will not conduct any new ground disturbance and Well work, including access road and pad construction, drilling and completion activities, and Flowline/utility corridor clearing and installation activities in the High Priority Habitats listed in Rule 1202.c.(1), (with Bald Eagles being listed in Rule 1202.c.(1).G).* Under Rule 1202.c the approved location will be subject to the 2024 CPW HPH map which places it within the ¼ mile buffer of the mapped Bald Eagle nest.

Extraction has committed to constructing the WPS outside of the 660 foot ¼ mile buffer of the Bald Eagle's nest, but a portion of the Oil and Gas location disturbed area, and the access road would be within that buffer. The Director has requested pursuant to Rule 301.e that Extraction proactively submit a variance request to the Commission for a variance from Rule 1202.c. A variance request was submitted by Extraction on August 23, 2024, under Docket 240800202.

Pursuant to Rule 502.a, Extraction submitted a variance request for a variance from Rule 1202.c.(1).G to be heard in front of the Commission concurrent to the Washington OGDG application, as the two dockets are intrinsically related. On December 1, 2023, the Director published the Director Recommendation for the Extraction Washington OGDG, recommending approval of the application. The hearing has been postponed several times in relation to the eagle nest in question. Although the OGDG application and the variance will be heard in front of the Commission on the same day, there are several considerations for the dockets moving forward. The Commission may approve the OGDG application and the variance, in which case Extraction can move forward with building the location, and drilling and completing the wells once Extractions obtains the necessary Form 2 approvals. The Commission may also vote to approve the OGDG application, and deny the variance request, in which case Extraction would have an approved OGDG, but could not construct the location or drill and complete the wells without applying for another variance, or waiting to see if the eagles abandon the nest in future years and wait for an updated CPW HPH map to go into effect. Finally, the Commission may

deny both the OGDG application and the variance, in which case Extraction would not be able to move forward with construction of the location, or drilling and completing the wells.

Pursuant to Rule 309.e.(2).E, consultations were held between Extraction, CPW, and the ECMC regarding the variance request. An on-site meeting at the proposed location occurred on August 20, 2024 where ECMC, CPW, Extraction visited the eagle's nest, and walked the proposed pad location. Discussions included Extraction committing to not occupying the surface area, including the access road, during Bald Eagle nesting season (December 1 – July 31) and committing to continuous monitoring of the nest in case there are eagles that have not fledged on or after July 31, constructing the WPS outside of the 660 foot  $\frac{1}{8}$  mile buffer, 32 foot sound walls around the entire location and lights will be located within sound walls, pointed downward, and will be adjusted as necessary during installation to ensure no direct line of sight to the nest, drill rigs powered by highline power, and three phase takeaway for oil, gas, and produced water, and an electrified production facility. The parcel where the proposed location is situated is also slated for proposed industrial warehouses and Extraction has committed to building the pad, and getting the 10 horizontal wells to production prior to the warehouses being built. A virtual meeting was held between Extraction, CPW, and ECMC on September 10, 2024 in order to discuss the CPW wildlife summary, and clarify any questions or concerns from previous meetings. CPW submitted their wildlife summary to the variance docket on September 10, 2024. CPW has indicated that they have unresolved concerns with the Extraction's variance request to Rule 1202.c.(1).G. Extraction submitted additional information in response to CPW's wildlife summary on October 3, 2024. More information regarding CPW's wildlife summary and Extraction's response can be found on Docket 240800202.

FORM  
2A

Rev  
05/22

State of Colorado  
Energy & Carbon Management Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203  
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:

403099558

Date Received:

02/02/2023

Oil and Gas Location Assessment

This Oil and Gas Location Assessment is to be submitted to the ECMC for approval prior to any ground disturbance activity associated with oil and gas operations. Approval of this Oil and Gas Location Assessment will allow for the construction of the below specified Location; however, it does not supersede any land use rules applied by the local land use authority. Please see the ECMC website at <https://ecmc.state.co.us/> for all accompanying information pertinent this Oil and Gas Location Assessment.

Location ID:

OGDP ID:

Expiration Date:

☒ New Location ☐ Refile ☐ Amend Existing Location # \_\_\_\_\_

If this Location assessment is a component of an Oil and Gas Development Plan (OGDP) application, enter the OGDP docket number(s).

Docket Number	OGDP ID	OGDP Name
230100033		

If this Location assessment is part of an approved Oil and Gas Development Plan, enter the OGDP ID number(s).

<No existing OGDP number provided>

CONSULTATION

- ☐ This location is included in a Comprehensive Area Plan (CAP). CAP ID # \_\_\_\_\_
- ☐ This Location or its associated new access road, utility, or Pipeline corridor meets Rule 309.e.(2).A, B, or C.
- ☐ This Location is within 2,640 feet of a GUDI or Type III Well per Rule 411.b.(4).
- ☐ This Location includes a Rule 309.e.(2).E variance request.
- ☐ This location includes a Rule 309.f.(1).A.ii. variance request.

Operator

Operator Number: 10459  
Name: EXTRACTION OIL & GAS INC  
Address: 555 17TH STREET SUITE 3700  
City: DENVER State: CO Zip: 80202

Contact Information

Name: Nathan Bennett  
Phone: (303) 312-8166  
Fax: ( )  
email: nbennett@civiresources.com

FINANCIAL ASSURANCE FOR THIS LOCATION (check all that apply)

- ☒ Plugging, Abandonment, and Reclamation 20130028
- ☐ Centralized E&P Waste Management Facility \_\_\_\_\_
- ☐ Gas Gathering, Gas Processing, and Underground Gas Storage Facilities \_\_\_\_\_
- ☐ Surface Owner Protection Bond. \_\_\_\_\_

Federal Financial Assurance

- ☐ In checking this box, the Operator certifies that it has provided or will provide at least this amount of Financial Assurance to the federal government for one or more Wells on this Location.

Amount of Federal Financial Assurance \$ \_\_\_\_\_

LOCATION IDENTIFICATION

Name: Washington Number: Pad

Provide the location description and the latitude and longitude of a single point near the center of the Working Pad Surface as a reference for this Location.

Quarter: NWSE Section: 10 Township: 1S Range: 68W Meridian: 6 Ground Elevation: 5185  
Latitude: 39.978580 Longitude: -104.984548  
GPS Quality Value: 1.4 Type of GPS Quality Value: PDOP Date of Measurement: 02/25/2022

## RELATED REMOTE LOCATIONS

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

This proposed Oil and Gas Location is: LOCATION ID # FORM 2A DOC #

## RELEVANT LOCAL GOVERNMENT SITING INFORMATION

County: ADAMS Municipality: Thornton

Per § 34-60-106 (1)(f)(I)(A), the following questions pertain to the "Relevant Local Government approval of the siting of the proposed oil and gas location."

This proposed Oil and Gas Location is in an area designated as one of State interest and subject to the requirements of § 24-65.1-108, C.R.S. No

Does the Relevant Local Government regulate the siting of Oil and Gas Locations, with respect to this location? Yes

A siting permit application has been submitted to the Relevant Local Government for this proposed Oil and Gas Location: No

Date Relevant Local Government permit application submitted: \_\_\_\_\_

Current status or disposition of the Relevant Local Government permit application for this proposed Oil and Gas Location: Other

Status/disposition date: 11/29/2022

If Relevant Local Government permit has been approved or denied, attach final decision document(s).

Provide the contact information for the Relevant Local Government point of contact for the local permit associated with this proposed Oil and Gas Location:

Contact Name: Collin Wahab Contact Phone: 303-538-7200  
Contact Email: Collin.Wahab@thorntonco.gov

## PROXIMATE LOCAL GOVERNMENT INFORMATION

For every Proximate Local Government (PLG) associated with this proposed Oil and Gas Location, provide the PLG's point of contact and their contact information.

Type of Proximate Govt	County	Municipality	Contact Name	Contact Phone	Contact Email
County	ADAMS	N/A	Greg Dean	720-523-6891	gdean@adcogov.org
County	BROOMFIELD	N/A	David Stainback	303-552-7315	dbrouillard@broomfield.org

## FEDERAL PERMIT INFORMATION

A Federal drilling permit (or related siting application) has been submitted for this proposed Oil and Gas Location: No

Date submitted: \_\_\_\_\_

Current status or disposition of the Federal drilling permit (or related siting application) for this proposed Oil and Gas Location: \_\_\_\_\_

Status/disposition Date: \_\_\_\_\_

If Federal agency permit has been approved or denied, attach the final decision document(s).

Provide the contact information of the Federal point of contact for the Federal permit associated with this proposed Oil and Gas Location.

Contact Name: \_\_\_\_\_ Contact Phone: \_\_\_\_\_

Contact Email: \_\_\_\_\_

Field Office: \_\_\_\_\_

Additional explanation of local and/or federal process:

Operator and the Relevant Local Government have entered into an "Operator Agreement" governing the proposed Washington OGD and associated appurtenances. A copy of this agreement has been uploaded in the ATTACHMENTS as "LOCAL/FED FINAL PERMIT DECISION".

## RELEVANT LOCAL GOVERNMENT OR FEDERAL PRE-APPLICATION CONSULTATION

Complete this section for any pre-application consultation related to this proposed Oil and Gas Location that occurred prior to the submission of this Form 2A. If a pre-application Formal Consultation Process occurred, attach a Consultation Summary.

Did a pre-application Formal Consultation Process occur with the Relevant Local Government per Rule 301.f.(3)? Yes

Date of local government consultation: 04/28/2022

Did a pre-application Formal Consultation Process occur with the Federal land manager per Rule 301.f.(3)? No

Date of federal consultation: \_\_\_\_\_

Was an ALA that satisfies Rule 304.b.(2).C (or substantially equivalent information per Rule 304.e) developed during a federal or local government permit application process? If yes, attach the ALA to the Form 2A. Yes

## ALA APPLICABILITY AND CRITERIA

Complete this section for any pre-application consultation related to this proposed Oil and Gas Location that occurred prior to the submission of this Form 2A. If a pre-application Formal Consultation Process occurred, attach a Consultation Summary.

Does the proposed Oil and Gas Location meet any of the criteria listed in Rule 304.b.(2)B? Yes

If YES, indicate by checking the box for every Rule 304.b.(2).B criterion met by this proposed Location, and attach an ALA. See Rule 304.b.(2).B.i-x for full text of criteria.

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> i. WPS < 2,000 feet from RBU/HOBU                                   | <input type="checkbox"/> vi.aa. WPS within a surface water supply area                                  |
| <input type="checkbox"/> ii. WPS < 2,000 feet from School/Child Care Center                             | <input type="checkbox"/> vi.bb. WPS < 2,640 feet from Type III or GUDI well                             |
| <input type="checkbox"/> iii. WPS < 1,500 feet from DOAA  | <input checked="" type="checkbox"/> vii. WPS within/immediately upgradient of wetland/riparian corridor |
| <input type="checkbox"/> iv. WPS < 2,000 feet from jurisdictional boundary and PLG objects/requests ALA | <input type="checkbox"/> viii. WPS within HPH and CPW did not waive                                     |
| <input type="checkbox"/> v. WPS within a Floodplain   | <input type="checkbox"/> ix. Operator using Surface bond  |
|   | <input type="checkbox"/> x. WPS < 2,000 feet from RBU/HOBU/School within a DIC                          |

Is the proposed Oil and Gas Location within the exterior boundaries of the Southern Ute Indian Reservation, and the Tribe objects to the Location or requests an ALA? If YES, attach an ALA to the Form 2A. No

Operator requests the Director waive the ALA requirement per Rule 304.b.(2).A.i: ☐

Provide an explanation for the waiver request, and attach supporting information (if necessary).

## ALTERNATIVE LOCATIONS DASHBOARD

List every alternative location reviewed and included in the ALA. Provide a latitude and longitude for the approximate center of the alternative location, all Rule 304.b.(2).B Criteria met, if a variance would be required to permit the location, and a brief comment on the key points of the alternative location.

304.b.(2).B.i-x Criteria Met:

#	latitude	longitude	i	ii	iii	iv	v	vi	vii	viii	ix	x	Variance Required?	Comments
	39.973104	-104.985438	x					x						ALA #1 - 19 RBUs, 32 BU
	39.974384	-104.973384	x	x				x						ALA #4 - 5 RBUs, 1 HOBUs (Childcare Facility)
	39.981211	-104.972308	x						x					ALA #3 - 11 RBUs, within HPH
	39.970659	-104.974279	x	x				x						ALA #5 - 7 RBUs, 1 HOBUs (Childcare Facility), 22 commercial BU, (3 Warehouses - combined sqft 340,541)
	39.967367	-104.985789	x	x				x						ALA #2 - 13 RBUs, 11+ HOBUs (Childcare facility, Apartment buildings), multiple commercial BUs
	39.981832	-104.964865	x							x				ALA #6 - 162 RBUs

## SURFACE & MINERAL OWNERSHIP

Surface Owner Info:

Name: Sands Partners, LLC

Phone: \_\_\_\_\_

Address: 1433 E 7th Avenue

Fax: \_\_\_\_\_

Address: \_\_\_\_\_

Email: soniadanielsen@icloud.com

City: Denver State: CO Zip: 80218

Surface Owner at this Oil and Gas Location: ☒ Fee ☐ State ☐ Federal ☐ Indian

Check only one: ☐ The Operator/Applicant is the surface owner.

☒ The Operator has a signed Surface Use Agreement for this Location – attach SUA.

☐ All operations on this Oil & Gas Location will develop the minerals beneath the Location, and the surface owner owns the minerals beneath this Location and is committed to an oil and gas lease – attach lease map or provide lease description.

☐ All operations on this Oil & Gas Location will develop the minerals beneath the Location, and the Operator intends to use a surface bond per Rule 703 to secure access to this Location – attach lease map or provide lease description.

Surface Owner protection Financial Assurance type: N/A

Surety ID Number: \_\_\_\_\_

Mineral Owner beneath this Oil and Gas Location: ☒ Fee ☐ State ☐ Federal ☐ Indian

Minerals beneath this Oil and Gas Location will be developed from or produced to this Oil and Gas Location: No

Lease description if necessary: \_\_\_\_\_

## SITE EQUIPMENT LIST

Indicate the number and type of major equipment components planned for use on this Oil and Gas Location:

Wells	10	Oil Tanks	0	Condensate Tanks	0	Water Tanks	0	Buried Produced Water Vaults	0
Drilling Pits	0	Production Pits	0	Special Purpose Pits	0	Multi-Well Pits	0	Modular Large Volume Tank	1



Pump Jacks	0	Separators	10	Injection Pumps	0	Heater-Treaters	0	Gas Compressors	2
Gas or Diesel Motors	0	Electric Motors	0	Electric Generators	0	Fuel Tanks	0	LACT Unit	0
Dehydrator Units	0	Vapor Recovery Unit	0	VOC Combustor	0	Flare	0	Enclosed Combustion Devices	1
Meter/Sales Building	2	Pigging Station	3	Vapor Recovery Towers	0				

OTHER PERMANENT EQUIPMENT

Permanent Equipment Type	Number
Surge Vessels	2
Compressor Sump	1
Instrument Air Skid	1
HP 2 Extension Skid	1
Oil Pump Skids	4
Maintenance Vessel	1
Water Pump Skids	3
Fuel Gas Scrubber	1
HP 2 Phase Skid	1
Water Coolers	2
LP Scrubber Skid	1
Electric Pad	1

OTHER TEMPORARY EQUIPMENT

Temporary Equipment Type	Number
Temporary Tanks	12
Sand Knockouts	10
Fracking Tank (Sand Flowback)	1

GAS GATHERING COMMITMENT

Operator commits to connecting to a gathering system by the Commencement of Production Operations? Yes

If the answer is NO, a Gas Capture Plan consistent with the requirements of Rule 903.e MUST be attached on the Plans tab.

FLOWLINE DESCRIPTION

Per Rule 304.b.(6), provide a description of all onsite and off-location oil, gas, and/or water flowlines.

Flowlines servicing the ten (10) wells proposed for this pad will be On-Location flowlines. These lines will run from the wellheads in a northerly direction to the individual separators. The separators will be tied into 3rd party midstream gathering lines in the NW corner of the working pad surface.

CULTURAL DISTANCE AND DIRECTION

Provide the distance and direction to the nearest cultural feature as measured from the edge of the Working Pad Surface.

				Rule 604.b Conditions Satisfied (check all that apply):			Details of Condition(s)	604.b. (4)
	Distance		Direction	604.b. (1)	604.b. (2)	604.b. (3)		
Building:	1766 Feet		SW					
Residential Building Unit (RBU):	1820 Feet		SW	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Nearest RBU is 2025' SW from the closest wellhead (or permanent equipment).	<input type="checkbox"/>
High Occupancy Building Unit(HOBU)	2792 Feet		N	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
Designated Outside Activity Area:	5280 Feet		W					
Public Road:	186 Feet		NW					

Above Ground Utility:	288	Feet	NE				
Railroad:	5280	Feet	W				
Property Line:	38	Feet	N				
School Facility:	5280	Feet	SE				
Child Care Center:	2935	Feet	SE				
Disproportionately Impacted (DI) Community:	1095	Feet	NW				
RBU, HOBUs, or School Facility within a DI Community:	4195	Feet	NW	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**RULE 604.a.(2). EXCEPTION LOCATION REQUEST**

☐ Operator requests an Exception Location Request from Rule 604.a.(2) [well is less than 150 feet from a property line]. Exception Location Request Letter and Waiver signed by offset Surface Owner(s) must be attached.

**CULTURAL FEATURE INFORMATION REQUIRED BY RULE 304.b.(3).B.**

Provide the number of each Cultural feature identified within the following distances, as measured from the Working Pad Surface:

	0-500 feet	501-1,000 feet	1,001-2,000 feet
Building Units	0	0	3
Residential Building Units	0	0	3
High Occupancy Building Units	0	0	0
School Properties	0	0	0
School Facilities	0	0	0
Designated Outside Activity Areas	0	0	0

**CONSTRUCTION**

Size of disturbed area during construction in acres: 14.20

Size of location after interim reclamation in acres: 3.64

Estimated post-construction ground elevation: 5183

**DRILLING PROGRAM**

Will a closed-loop drilling system be used? Yes

Is H2S gas reasonably expected to be encountered during drilling operations at concentrations greater than or equal to 100 ppm? No If YES, attach H2S Drilling Operations Plan.

Will salt sections be encountered during drilling: No

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

Will oil based drilling fluids be used? Yes

<b>DRILLING WASTE MANAGEMENT PROGRAM</b>	
Drilling Fluids Disposal: <u>OFFSITE</u>	Drilling Fluids Disposal Method: <u>Recycle/reuse</u>
Cutting Disposal: <u>OFFSITE</u>	Cuttings Disposal Method: <u>Commercial Disposal</u>
Other Disposal Description:	
<u>Operator will employ IOGP Group III drilling fluids during drilling operations.</u>	
Beneficial reuse or land application plan submitted? <u>          </u>	
Reuse Facility ID: <u>                    </u>	or Document Number: <u>                    </u>
Centralized E&P Waste Management Facility ID, if applicable: <u>                    </u>	

## CURRENT LAND USE

**Current Land Use: check all that apply per Rule 304.b.(9).**

Crop Land: ☐ Irrigated ☒ Non-Irrigated ☐ Conservation Reserve Program (CRP)

Non-Crop Land: ☐ Rangeland ☐ Forestry ☐ Recreation ☐ Other

Subdivided: ☐ Industrial ☐ Commercial ☐ Residential

Describe the current land use:

Undeveloped, non-irrigated fallow land that has been mowed and/or tilled at regular intervals.

Describe the Relevant Local Government's land use or zoning designation:

Planned Development; intended future land use is designated as "Employment Center -Warehouse Overlay".

Describe any applicable Federal land use designation:

FINAL LAND USE
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Final Land Use: check all that apply per Rule 304.b.(9).

Crop Land:	<input type="checkbox"/> Irrigated	<input type="checkbox"/> Non-Irrigated	<input type="checkbox"/> Conservation Reserve Program (CRP)	
Non-Crop Land:	<input type="checkbox"/> Rangeland	<input type="checkbox"/> Forestry	<input type="checkbox"/> Recreation	<input type="checkbox"/> Other
Subdivided:	<input checked="" type="checkbox"/> Industrial	<input checked="" type="checkbox"/> Commercial	<input type="checkbox"/> Residential	

## REFERENCE AREA INFORMATION

Describe landowner's designated final land use(s):

Reference Area Latitude: \_\_\_\_\_ Reference Area Latitude: \_\_\_\_\_

Provide a list of plant communities and dominant vegetation found in the Reference Area.

< No row provided >

Noxious weeds present: \_\_\_\_\_ No \_\_\_\_\_

SOILS	
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List all soil map units that occur within the maximum extent of the proposed Oil and Gas Location. Attach the National Resource Conservation Service (NRCS) report showing the "Map Unit Description" listing the typical vertical soil profile(s). This data is to be used when segregating topsoil.

The required information can be obtained from the NRCS website at <https://www.nrcs.usda.gov/wps/portal/nrcs/surveylist/soils/survey/state/> or from the ECMC website GIS Online map page. Instructions are provided within the ECMC website help section.

NRCS Map Unit Name: 2tln0 - Platner loam 0-3% slopes (PIB)

NRCS Map Unit Name: 2tlmz - Platner loam 3-5% slopes (PIC)

NRCS Map Unit Name: 34x4 - Ulm loam 3-5% slopes (UIC)

## GROUNDWATER AND WATER WELL INFORMATION

Provide the distance and direction, as measured from the Working Pad Surface, to the nearest:

water well: 1624 Feet S

Spring or Seep: 800 Feet SW

Estimated depth to shallowest groundwater that can be encountered at this Oil and Gas Location: 13 Feet

Basis for estimated depth to and description of shallowest groundwater occurrence:

Operator reviewed DWR files from water wells identified in the area. DWR records indicate the nearest well is either 1) a shallow, dewatering well (DWR\_2734296 which appears to be erroneously plotted and is excluded from the nearest water well), or 2) deep irrigation wells (i.e., DWR 8583-AD, DWR-8994-F). Therefore, estimated depth to groundwater is based on a shallow, subsurface geotechnical investigation performed S-SE of the proposed Oil & Gas Location in 2020. Reference Point 39.9746883, -104.9810974.

## SURFACE WATER AND WETLANDS

Provide the distance and direction to the nearest downgradient surface Waters of the State, as defined 744 Feet E

in the 100-Series Rules, measured from the Working Pad Surface:

If less than 2,640 feet, is the Waters of the State identified above within 15 stream miles upstream of a Public Water System intake? No

Provide the distance and direction to the nearest downgradient wetland, measured from the Working

Pad Surface: 125 Feet N

Provide a description of the nearest downgradient surface Waters of the State:

FRICO's Bull Canal - a seasonal irrigation ditch is located 744' from the eastern edge of the proposed working pad surface. There is a small portion of the Bull Canal that is approximately 191' east of the location that is abandoned and inactive.

If the proposed Oil and Gas Location is within a Rule 411.a Surface Water Supply Area buffer zone, select the buffer zone type:

Public Water System Administrator - Contact Name Email

If the proposed Oil and Gas Location is within a Rule 411.b GUDI/Type III buffer zone, select the buffer zone type:

Public Water System Administrator - Contact Name Email

Is a U.S. Army Corps of Engineers Section 404 permit required for the proposed Oil and Gas Location, access road, or associated pipeline corridor? No

If a U.S. Army Corps of Engineers Section 404 permit is required, provide the permit status, and permit number if available:

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

☒ Federal (FEMA) ☐ State ☐ County ☐ Local

☐ Other

Does this proposed Oil and Gas Location lie within a Sensitive Area for water resources, as defined in the 100-Series Rules? Yes

## CONSULTATION, WAIVERS, AND EXCEPTIONS

When Rule 309.e.(2) Consultation must occur, check all that apply:

- ☐ This location is included in a Wildlife Mitigation Plan
- ☐ This Oil and Gas Location or associated new access road, utility, or pipeline corridor falls within federally designated critical habitat or an area with a known occurrence for a federal or Colorado threatened or endangered species. Provide description in Comments section of Submit tab.
- ☐ This Oil and Gas Location or associated new access road, utility, or pipeline corridor falls within an existing conservation easement established wholly or partly for wildlife habitat. Provide description in Comments section of Submit tab.

When Rule 309.e.(3) Consultation is not required, check all that apply:

- ☐ This Oil and Gas Location has been included in a previously approved, applicable Wildlife Protection Plan.
- ☐ This Oil and Gas Location has been included in a previously approved, applicable Wildlife Mitigation Plan.
- ☐ This Oil and Gas Location has been included in a previously approved, applicable conservation plan.

Pre-application Consultation:

- ☐ A pre-application consultation with CPW, regarding this Oil and Gas Location, occurred on: \_\_\_\_\_

## CPW Waivers and Exceptions (check all that apply and attach all CPW waivers to this Form 2A):

- ☐ The applicant has obtained a Rule 304.b.(2).B.viii CPW waiver for the requirement to complete an ALA.
- ☐ The applicant has obtained a Rule 309.e.(2).G CPW waiver and consultation is not required.
- ☐ The applicant has obtained a Rule 309.e.(5).D.i CPW waiver and is requesting an exception from Rule 1202.c.(1).R.
- ☐ The applicant has obtained a Rule 309.e.(5).D.ii CPW waiver and is requesting an exception from Rule 1202.c.(1).S.
- ☐ The applicant has obtained a Rule 309.e.(5).D.iii CPW waiver of Rule 1202.c.(1).T.
- ☐ The applicant has obtained a Rule 309.e.(5).D.iv CPW waiver and is requesting an exception from Rule 1202.c.(1) in accordance with an approved CAP.
- ☒ The applicant has obtained a Rule 1202.a CPW waiver.
- ☐ The applicant has obtained a Rule 1202.b CPW waiver.
- ☐ In accordance with Rule 1203.a.(3), the applicant requests an exception from compensatory mitigation Rule(s): \_\_\_\_\_

## HIGH PRIORITY HABITAT AND COMPENSATORY MITIGATION

This Oil and Gas Location, associated access roads, utility, or Pipeline corridor falls wholly or partially within the following High Priority Habitats (Note: dropdown options are abbreviated - see Rule 1202 for full rule text):

< No row provided >

The following questions are for Oil and Gas Locations that cause the density to exceed one Oil and Gas Location per square mile in Rule 1202.d High Priority Habitat:

Direct Impacts:

Is Compensatory Mitigation required per Rule 1203.a for this Oil and Gas Location? No

Is a Compensatory Mitigation Plan proposed to address direct impacts for this Oil and Gas Location? No

Have all Compensatory Mitigation Plans been approved for this Location? No

If not, what is the current status of each Plan?

N/A

Is a Compensatory Mitigation Fee proposed for this Oil and Gas Location? No

Direct impact habitat mitigation fee amount: \$ \_\_\_\_\_

Indirect Impacts:

Is Compensatory Mitigation required per Rule 1203.d for this Oil and Gas Location? No

Is a Compensatory Mitigation Plan proposed to address indirect impacts for this Oil and Gas Location? No

Have all Compensatory Mitigation Plans been approved for this Location? No

If not, what is the current status of each Plan?

N/A

Is a Compensatory Mitigation Fee proposed for this Oil and Gas Location? No

Indirect impact habitat mitigation fee amount: \$ \_\_\_\_\_

**Operator Proposed Wildlife BMPs**

No BMP

**CPW Proposed Wildlife BMPs**

No BMP

**AIR QUALITY MONITORING PROGRAM**

Will the Operator install and administer an air quality monitoring program at this Location? Yes

**Operator Proposed BMPs**

No BMP

**CDPHE Proposed COAs OR BMPs**

No BMP

**PLANS**

Total Plans Uploaded: 15

☐ (1) Emergency Spill Response Program consistent with the requirements of Rules 411.a.(4).B, 411.b.(5).B, & 602.j

- ☒ (2) Noise Mitigation Plan consistent with the requirements of Rule 423.a
- ☒ (3) Light Mitigation Plan consistent with the requirements of Rule 424.a
- ☒ (4) Odor Mitigation Plan consistent with the requirements of Rule 426.a
- ☒ (5) Dust Mitigation Plan consistent with the requirements of Rule 427.a
- ☒ (6) Transportation Plan
- ☒ (7) Operations Safety Management Program consistent with the requirements of Rule 602.d
- ☒ (8) Emergency Response Plan consistent with the requirements of Rule 602.j
- ☐ (9) Flood Shut-In Plan consistent with the requirements of Rule 421.b.(1)
- ☐ (10) Hydrogen Sulfide Drilling Operations Plan consistent with the requirements of Rule 612.d
- ☒ (11) Waste Management Plan consistent with the requirements of Rule 905.a.(4)
- ☐ (12) Gas Capture Plan consistent with the requirements of Rule 903.e
- ☒ (13) Fluid Leak Detection Plan
- ☒ (14) Topsoil Protection Plan consistent with the requirements of Rule 1002.c
- ☒ (15) Stormwater Management Plan consistent with the requirements of Rule 1002.f
- ☒ (16) Interim Reclamation Plan consistent with the requirements of Rule 1003
- ☒ (17) Wildlife Plan consistent with the requirements of Rule 1201
- ☒ (18) Water Plan
- ☒ (19) Cumulative Impacts Plan
- ☐ (20) Community Outreach Plan
- ☐ (21) Geologic Hazard Plan

## VARIANCE REQUESTS

Check all that apply:

- ☐ This proposed Oil and Gas Location requires the approval of a Rule 502.a variance from ECOM Rule or Commission

Order number: \_\_\_\_\_

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

## RULE 304.d LESSER IMPACT AREA EXEMPTION REQUESTS

Check the boxes below for all Exemptions being requested. Lesser Impact Area Exemption Request must be attached, and will include all requested exemptions.

- |  |  |
|--|--|
| <input type="checkbox"/> 304.b.(1). Local Government Siting Information      | <input type="checkbox"/> 304.c.(1). Emergency Spill Response Program           |
| <input type="checkbox"/> 304.b.(2). Alternative Location Analysis            | <input type="checkbox"/> 304.c.(2). Noise Mitigation Plan                      |
| <input type="checkbox"/> 304.b.(3). Cultural Distances                       | <input type="checkbox"/> 304.c.(3). Light Mitigation Plan                      |
| <input type="checkbox"/> 304.b.(4). Location Pictures                        | <input type="checkbox"/> 304.c.(4). Odor Mitigation Plan                       |
| <input type="checkbox"/> 304.b.(5). Site Equipment List                      | <input type="checkbox"/> 304.c.(5). Dust Mitigation Plan                       |
| <input type="checkbox"/> 304.b.(6). Flowline Descriptions                    | <input type="checkbox"/> 304.c.(6). Transportation Plan                        |
| <input type="checkbox"/> 304.b.(7). Drawings                                 | <input type="checkbox"/> 304.c.(7). Operations Safety Management Program       |
| <input type="checkbox"/> 304.b.(8). Geographic Information System (GIS) Data | <input type="checkbox"/> 304.c.(8). Emergency Response Plan                    |
| <input type="checkbox"/> 304.b.(9). Land Use Description                     | <input type="checkbox"/> 304.c.(9). Flood Shut-In Plan                         |
| <input type="checkbox"/> 304.b.(10). NRCS Map Unit Description               | <input type="checkbox"/> 304.c.(10). Hydrogen Sulfide Drilling Operations Plan |
| <input type="checkbox"/> 304.b.(11). Best Management Practices               | <input type="checkbox"/> 304.c.(11). Waste Management Plan                     |
| <input type="checkbox"/> 304.b.(12). Surface Owner Information               | <input type="checkbox"/> 304.c.(12). Gas Capture Plan                          |
| <input type="checkbox"/> 304.b.(13). Proximate Local Government              | <input type="checkbox"/> 304.c.(13). Fluid Leak Detection Plan                 |
| <input type="checkbox"/> 304.b.(14). Wetlands                                | <input type="checkbox"/> 304.c.(14). Topsoil Protection Plan                   |
| <input type="checkbox"/> 304.b.(15). Schools and Child Care Centers          | <input type="checkbox"/> 304.c.(15). Stormwater Management Plan                |
|  | <input type="checkbox"/> 304.c.(16). Interim Reclamation Plan                  |
|  | <input type="checkbox"/> 304.c.(17). Wildlife Plan                             |
|  | <input type="checkbox"/> 304.c.(18). Water Plan                                |
|  | <input type="checkbox"/> 304.c.(19). Cumulative Impacts Plan                   |
|  | <input type="checkbox"/> 304.c.(20). Community Outreach Plan                   |
|  | <input type="checkbox"/> 304.c.(21). Geologic Hazard Plan                      |

## OPERATOR COMMENTS AND SUBMITTAL

Comments



The Washington Pad will be a tankless facility with oil, natural gas, and produced water takeaway. Additional BMPs, as captured in Exhibit B of the Operator Agreement, include but are not limited to the utilization of a production rig and all permanent production equipment that shall be powered by electric line power.

The proposed location is located w/in the generalized GUDI/Type III aquifer buffer zone. The subject water well (DWR Permit #266446-A) was field verified and is located more than 2640' from the edge of the proposed Working Pad Surface.

Operator certifies that the MLVTs will be designed and implemented consistent with the COGCC Policy on the Use of Modular Large Volume Tanks in Colorado. MLVT Design Package, certified and sealed by a licensed professional engineer, is available upon request.  
 Manufacturer of MLVT: Hydrologistics (note - Operator reserves the right to employ MLVTs from a different manufacturer based on availability).  
 Size and Volume: One (1) MLVT, approximately 190' diameter and capable of storing ~61,000 BBLs of freshwater.  
 Anticipated time frame: 60 days.

CULTURAL DISTANCES: there is three (3) RBU w/in 2000' of the proposed Working Pad Surface. Distances subject to Rule 604.b.(3) are as follows:  
 RBU from nearest well: 2025' SW  
 RBU from nearest permanent production equipment: 2020' SW

Additional NRCS Map Unit Description: 34x5 - Ulm loam 5-9% slopes (UID)

Landowners final land use: Proposed future development is described as "an industrial park containing seven (7) buildings" as contained in the "LPC Mile High Once Conceptual Site Plan" submitted to City of Thornton on or about 01/11/2022.

The temporary Fracking Tank stores flowback sand and does not generate any emissions.

A Wildlife Management Plan was uploaded but a consultation was not required since there weren't any species that required consultation per COGCC Rule 309.e.(1).

The Emergency Response Plan is being reviewed by Thornton Fire Department. When approval has been secured, operator will notify ECMC staff.

Operator has requested an ECMC Rule 1202.a.(3) CPW waiver for the wetlands within 500' of the proposed working pad surface. Once the executed waiver is received it will be provided to staff.

Operator is in the process of consulting with the three (3) RBUs within 2000' of the working pad surface, once consultations have been completed a summary will be provided to ECMC staff.

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

Signed: \_\_\_\_\_ Date: 02/02/2023 Email: jannable@civiresources.com

Print Name: Jeff Annable Title: Manager, Permitting

Based on the information provided herein, this Oil and Gas Location Assessment complies with ECMC Rules, applicable orders, and SB 19-181 and is hereby approved.

ECMC Approved: \_\_\_\_\_ Director of ECMC Date: \_\_\_\_\_

### **CONDITIONS OF APPROVAL, IF ANY LIST**

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

#### **COA Type**

#### **Description**

0 COA	

## Best Management Practices

<u>No</u> <u>BMP/COA Type</u>	<u>Description</u>
1 General Housekeeping	Biohazardous waste will be stored in a portable toilet with an approximate capacity of 34 gallons. It is estimated that it will be emptied 2 times a week and taken to a commercial disposal facility.`
2 General Housekeeping	<p>Minimizing lighting when not needed using timers or motion sensors ("use only the lights you need").</p> <p>Operator will use lighting colors that reduce light intensity.</p> <p>Operator will use low-glare and no-glare lighting.</p> <p>Operator shall direct site lighting downward and inward, such that no light shines above a horizontal plane passing through the center point of the light source, with lights hidden by the sound wall.</p> <p>Operator will place bulbs within fixtures that obscure, block, or diffuse the light to reduce light intensity outside the boundaries of the oil and gas location.</p> <p>Operator will not install permanent production lighting`</p>
3 General Housekeeping	<p>Consistent with good materials and waste management practices, XOG maintains records of material/waste source, transporter, and final disposition or disposal. These records are maintained under usual and customary practice and are made available upon request. See attached list of waste disposal facilities that XOG has active waste disposal profiles with. Depending on operational considerations, the type of waste in question, and approved disposal profiles, XOG may send waste to one or more approved facilities on a single, individual project.</p> <p>XOG minimizes the generation of waste by ensuring that material products are fully used for their intended purpose. If unused materials remain following an activity, contractors are required to take unused product with them for reuse at the next applicable project. Contractors are contractually required to comply with applicable material and waste management practices.</p> <p>In the event of an unintended release of material by a contractor, XOG requires the contractor to report the release, and to remediate impacts in accordance with applicable cleanup standards. XOG tracks all contractor releases to closure by requiring formal documentation, supported by laboratory analysis demonstrating cleanup of site impacts, any required waste characterization, waste disposal approval, and manifests or load tickets tracking waste from source, through transport, to final disposal.</p> <p>If there are unanticipated hazardous waste streams not listed in the attached Waste Streams Spreadsheet, the hazardous waste will be stored and disposed of in compliance with all rules and regulations applicable to that specific waste.</p> <p>Produced water with no commercial value or reuse potential is typically disposed of via underground injection. In all instances, produced water is disposed of at an offsite location(s) via properly permitted disposal facilities including but not limited to UIC wells intended specifically for produced water disposal.</p> <p>Soils impacted with produced fluids may be either remediated onsite with COGCC, landowner, and, if required, local government approval, or transported offsite for disposal at a disposal facility permitted to receive E&amp;P waste. All incidents are reported in accordance with COGCC 900-Series Rules.</p> <p>All drill cuttings generated during drilling operations are transported offsite with proper manifesting for disposal at facilities properly permitted to receive E&amp;P waste. Drilling fluids will be stored on-site and recycled for use in future drilling operations.</p> <p>All surface trash, debris and material not intrinsic to the operation of the oil and gas facility shall be removed stored in a roll off container or other trash bin and disposed of at a commercial solid waste disposal location.`</p>

4	Wildlife	<p>If a trench is left open for more than 5 consecutive days during pipeline construction, Extraction will install wildlife escape ramps at a minimum of one ramp per ¼ mile of trench.</p> <p>Extraction will use CPW-recommended seed mixes for interim and final reclamation when consistent with the Surface Owner's approval and any local soil conservation district requirements.</p> <p>Extraction will conduct all vegetation removal necessary for Oil and Gas Operations outside of the nesting season for migratory birds (April 1 to August 31). For any vegetation removal that must be scheduled between April 1 to August 31, Extraction will implement appropriate hazing or other exclusion measures prior to April 1. If hazing or other exclusion measures are not implemented, Extraction will assign a qualified contractor to conduct pre-construction nesting migratory bird surveys within the approved disturbance area prior to any vegetation removal during the nesting season. If any active nests are located, Extraction will establish appropriate work zone buffers around the nest(s).</p> <p>Extraction will ensure all personnel and contractors are aware of and adhere to all applicable wildlife mitigation measures and BMPs;</p> <p>Extraction personnel and contractors will not harm any wildlife observed on site and will maintain recommended buffer distances related to wildlife;</p> <p>Extraction personnel and contractors will report any wildlife concerns, including the discovery of injured or orphaned wildlife, to on-site management and applicable EHSR personnel;</p> <p>Extraction will consult the City of Thornton, CPW, and/or any other applicable agencies, upon the discovery of new wildlife constraints, as needed;</p> <p>Extraction will use qualified third-party contractors for wildlife surveys, monitoring, and other consultation purposes; and</p> <p>Extraction and/or its contractors will document any wildlife-related issues or changes.</p>	
5	Storm Water/Erosion Control	<p>Topsoil will be stockpiled along the southeastern edge of the proposed pad. In order to mitigate topsoil loss and migration of soil offsite, the stockpile will be contained using a perimeter erosion control device. Perimeter erosion controls will remain in place at any time the stockpile is not being actively accessed and until vegetative cover is established. Erosion control devices shall be placed within 5-10 feet of the toe of slope.</p> <p>Once topsoil segregation and stockpiling are complete, the soil will be seeded with the specified seed mix (see Appendix D). Establishing vegetative cover will help to stabilize the soil, reduce wind and water erosion, minimize sheet flow and rill erosion, and reduce overall surface runoff. The stockpile will be regularly monitored for noxious weed growth. Re-seeding will occur as necessary, over the course of the project life in order to achieve wide spread, uniform vegetative cover.</p> <p>Post seeding, a layer of straw or hay mulch will be installed via crimping along the stockpile, in order to promote seed germination and further stabilization of the soil. Mulching helps to mitigate the impacts of rainfall and increase soil moisture retention. Mulching will be monitored and re-applied as necessary, until vegetative growth is established.</p> <p>Filter socks composed of excelsior, rocks, straw, coconut fibers, wood chips, or compost will be installed along the northern perimeter of the stormwater pond and the topsoil stockpiles. Erosion logs will aid in reducing flow velocities to mitigate rill erosion, and capture sediment to mitigate runoff. Erosion control logs will remain in place until the pad is stabilized.</p>	

6	Storm Water/Erosion Control	<p>To the extent practicable, erosion and sediment control measures shall be installed prior to grading activities. At all times during project construction, all temporary and permanent erosion and sediment control measures shall be maintained and repaired as needed to prevent accelerated erosion on the site and on any adjacent properties.</p> <p>The following storm water quality structural BMPs will be utilized during construction: VTC Pad, Ditch &amp; Berm System, Inlet protection, culvert outlet protection, silt fencing, rip rap, erosion control mat, and sediment control log.</p> <p>The following storm water quality structural BMPs will be utilized during production phase: culvert outlet protection, rip rap, and revegetation.</p> <p>All topsoil, where physically practicable, shall be salvaged and no topsoil shall be removed from site except as set forth in the approved plans. Topsoil and overburden shall be segregated and stockpiled separately. Topsoil and overburden shall be redistributed within the graded area after rough grading to provide a suitable base for areas which will be seeded and planted. runoff from stockpiled area shall be controlled to prevent erosion and resultant sedimentation of receiving water.</p> <p>Permanent or temporary soil stabilization measures shall be applied to disturbed areas within 14 days after final grade is reached on any portion of the site. Soil stabilization measures shall be applied within 14 days to disturbed areas which may not be at final grade, but will be left dormant for longer than 30 days. It is recommended that the permanent seed mix be planted after October to keep seedlings from developing before winter. Temporary vegetative cover consisting of annual rye grass shall be hydro seeded at 20 pounds pure live seed per acre.</p> <p>Fugitive dust emissions resulting from drilling access road construction activities and /or wind shall be controlled using water.</p> <p>Additional erosion control measures may be required during construction and shall be installed as soon as practical if required by the stormwater administrator or their representative.</p> <p>Areas where sediment control logs are not indicated may require some form of sediment control. Straw mulch and/or temporary seeding may be utilized as necessary.</p> <p>Inspection will be performed every 14 days following a weather event causing runoff during the construction phase. Inspections will be performed every 30 days during the completed and interim phases. An inspection report will be filled out &amp; filed for each inspection performed.</p> <p>Maintenance and repairs will be performed as soon as possible on items or areas identified in the inspection report. Maintenance will be performed as indicated in the Urban Drainage &amp; Flood Control District, Urban Storm Drainage Criteria Manual, Vol 3,</p>	
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7	Material Handling and Spill Prevention	<p>During drilling, completion, and production operations, regular Auditory, Visual, and Olfactory Monitoring (AVO) inspections are performed on equipment containing hydrocarbons, fluids, or associated chemicals. AVO inspections include taking the time to look, smell and listen for leaks.</p> <p>Operator utilizes a polyethylene liner beneath the drilling rig during drilling operations and beneath the areas where completions equipment (including pump trucks and other heavy equipment) during completion operations to ensure there is an impermeable layer between the rig and the earth. The use of this liner prevents hydrocarbons and other fluids from reaching the soil in the unlikely event a leak does occur. The liner is inspected for integrity throughout drilling operations and maintenance/repair to the liner occurs as needed.</p> <p>Routine SPCC inspections will be conducted and documented pursuant U.S. EPA requirements.</p> <p>The location will have a sophisticated automation system running 24-hours per day that enables our operators, engineers, and various other personnel to monitor and manage this facility both on the ground and/or remotely. The site can also be shut down remotely via our automation system at any time. During these shutdowns automatic valves close within the facility and on each wellhead.</p> <p>Operator has developed a robust Leak Detection and Repair (LDAR) program, which utilizes Forward Looking Infrared (FLIR®) cameras to identify and fix leaks. FLIR inspections will commence during the production phase, and will occur monthly for the first year, with the first inspection being within 30 days of when the facility commences operation. After the first year of production operations, the inspections may be reduced to quarterly should no other state or federal rule be more stringent.</p>	
8	Dust control	<p>Dust suppression during initial construction will be accomplished by the application of freshwater to the access road and exposed earthen surfaces to reduce the transportability of dust when atmospheric conditions are conducive to sustained winds and/or periodic gusts.</p> <p>To minimize sand-related dust emissions, the Operator will be utilizing containerized box technology for sand transport, storage and use during the completions phase. These sand containers (or “sand boxes”) are sealed containers that protect the sand from exposure to wind and prevent dust generation.</p> <p>Operator will post an access road speed limit not to exceed 15 miles per hour to minimize fugitive dust emissions from vehicle traffic traveling on the access road.</p> <p>Operator will perform regular inspections and road maintenance to ensure the integrity of the access road and associated features is maintained throughout the life of this project. Maintenance consists of re-compacting the road base/recycled asphalt mix on an as-needed basis.</p> <p>Operator will install and maintain vehicle tracking controls (i.e., coarse aggregate, a tracking pad, paved apron, or cattle guard) to further reduce and remove loose mud and dirt on construction equipment and vehicles servicing location.</p>	
9	Noise mitigation	<p>Idling Equipment – While idling engine/equipment, maintain at the lowest frequency possible, as well as, in a position/location that will prevent sound from carrying to nearby residents.</p> <p>Unnecessary Sounds – Unnecessary sounds such as honking the horn, revving vehicle engines, loud music, and unwarranted metal hammering/banging are all examples of sound that can create nuisance; failure to eliminate unnecessary sound from location will be subject to an internal compliance assessment if reported by a landowner.</p> <p>Sound walls will be provided by a third-party vendor. A 32' tall, STC – 32 rated acoustic paneled, engineered sound wall, or similar, will be utilized.</p> <p>The construction phase is scheduled to last, at this time, approximately 12 weeks.</p> <p>At the time of this NMP, Patterson 345 is scheduled to be utilized for the drilling of the Washington location. Patterson 345 will be equipped with highline power, instead of Tier II diesel engines, for use at the Washington location. Rigs have been designed and equipped with sound mitigating equipment including devices to minimize squeaking from the draw works brakes. The drill phase is scheduled to last, at this time, for approximately 8 weeks.</p> <p>A quiet frac fleet will be used during the completion phase. The frac is scheduled, at this time, to last for approximately 13 weeks.</p>	

10	Emissions mitigation	Operator will utilize a Tier IV or equivalent completion fleet for hydraulic fracturing operations.`
11	Odor mitigation	<p>Operator will use a filtration system and additives to the drilling and fracturing fluids to minimize odors.</p> <p>Operator shall utilize a closed-loop, pit-less mud system for managing drilling fluids. Operator shall employ the use of IOGP Group III drilling fluids with extremely limited levels of total aromatics and polycyclic aromatic hydrocarbons during drilling operations after the surface casing is set and freshwater aquifers are protected.</p> <p>Operator shall remove drill cuttings daily and as soon as waste containers are full.</p> <p>Operator shall employ pipe cleaning procedures when removing drill pipe from the hole; these procedures may include "wiping" the pipe before racking it in the derrick.</p> <p>If a justified complaint is received, Operator may utilize a mud-chiller to reduce odor breakout and increase concentration of odor-mitigating additives in mud system.</p> <p>Operator will utilize a maintenance vessel system which eliminates venting from the location.</p> <p>Operator will utilize a pneumatic air system to power the facilities on location which will eliminate the small amount of venting that would normally occur during production operations.`</p>
12	Drilling/Completion Operations	Operator will install two (2) wash lines in the mud-gas separator and use a tank to prevent clogging during drilling operations.`

13	Drilling/Completion Operations	<p>Operator will properly maintain vehicles and equipment.</p> <p>Operator will use non-emitting pneumatic controllers.</p> <p>Operator will use electric drilling rigs if available, and will demonstrate best-effort if unable to utilize them.</p> <p>Operator will use Tier IV or equivalent engines, such as NG Tier II w/ battery assist, (or better) for hydraulic fracturing.</p> <p>Operator will use electric equipment and devices (e.g. vapor recovery units or VRUs, fans, etc.) to minimize combustion sources on site (if yes, operator will provide a list outlining which equipment and devices will be electrified).</p> <p>Operator will not store hydrocarbon liquids in permanent storage tanks on site (other than a maintenance tank possibly used for well unloading or other maintenance activities).</p> <p>Operator will not store produced water in permanent storage tanks on site (other than a maintenance tank possibly used for well unloading or other maintenance activities).</p> <p>Operator will implement a "hybrid production flowback method" or "modern production flowback method" (eliminates tanks by routing the oil, natural gas and water directly to permanent production equipment).</p> <p>Operator will use pipelines to transport water used for hydraulic fracturing to location.</p> <p>Operator will use pipelines to transport water used for hydraulic fracturing from location.</p> <p>Operator will have adequate and committed pipeline take away capacity for all produced gas and oil.</p> <p>Operator will shut in the facility to reduce the need for flaring if the pipeline is unavailable.</p> <p>Operator will use lease automatic custody transfer (LACT) system to remove/reduce the need for truck loadout.</p> <p>Operator will use OGP Group III drilling fluid.</p> <p>Operator will cover trucks transporting drill cuttings.</p> <p>Operator will use a squeegee or other device to remove drilling fluids from pipes as they exit the wellbore.</p> <p>Operator will ensure that all drilling fluid is removed from pipes before storage.</p> <p>Ozone mitigation on forecasted high ozone days: operator will eliminate use of VOC paints and solvents.</p> <p>Ozone mitigation on forecasted high ozone days: operator will minimize vehicle and engine idling.</p> <p>Ozone mitigation on forecasted high ozone days: operator will reduce truck traffic and worker traffic.</p> <p>Ozone mitigation on forecasted high ozone days: operator will postpone the refueling of vehicles.</p> <p>Ozone mitigation on forecasted high ozone days: operator will reschedule non-essential operational activities such as pigging, well unloading and tank cleaning.</p> <p>Ozone mitigation on forecasted high ozone days: Operator will postpone flowback if emissions cannot be adequately captured with a vapor recovery unit (VRU).</p> <p>Operator will use Modular Large Volume Storage Tanks.</p> <p>Secondary containment: Operator will install perimeter controls to control potential sediment-laden runoff in the event of spill or release from Modular Large Volume Storage Tank.</p> <p>Operator will not use fracturing fluids which contain PFAS compounds.</p> <p>Operator will contribute to nearby fire district(s) to support transition away from PFAS-containing foam through funding, buy-back program participation/promotion, etc..</p> <p>Operator will coordinate with nearby fire district(s) to evaluate whether PFAS-free foam can provide the required performance for the specific hazard.</p> <p>If PFAS-containing foam is used at a location: operator will properly characterize the site to determine the level, nature and extent of contamination.</p> <p>If PFAS-containing foam is used at a location: operator will perform appropriate soil and water sampling to determine whether additional characterization is necessary and inform the need for and extent of interim or permanent remedial actions.</p> <p>If PFAS-containing foam is used at a location: operator will properly capture and dispose of PFAS-contaminated soil and fire and flush water.</p> <p>Operator commits to providing power for the CDPHE CAMML if requested, subject to grid power availability.</p> <p>Operator commits to utilizing multiple air quality monitoring techniques during the entirety of the pre-production phase, in addition to standard APCD requirements.</p>	
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14	Interim Reclamation	<p>A temporary berm made of either compacted subsoil or coarse aggregate along with an associated diversion ditch will be placed on the north, west, and southern perimeter of the pad. The diversion ditch and berm will function to divert runoff into the detention pond helping to prevent erosion and reduce sediment transport. The diversion ditch and berm will remain in place until the pad has been stabilized.</p> <p>The vehicle tracking control will be made with coarse-aggregate surface underlaid by a geotextile, a construction mat, or a wheel wash located at the entrance/exit of the Site west of Washington Street. This will function in sediment control and materials management by reducing the tracking of sediment off Site. The vehicle tracking control will remain in place until Site has been stabilized.</p> <p>Rip-rap, grouted rip-rap, or concrete will be placed along the eastern side of the pond outlet structure as well as within the emergency spillway. Outlet protection will be installed to reduce the velocity of concentrated water flow in order to mitigate rill and gully erosion. All installed outlet protection will remain in place until the pad is stabilized.</p> <p>Topsoil will be stockpiled along the eastern portion of the permitted limit of disturbance. In order to mitigate topsoil loss and migration of soil offsite, the stockpile will be contained using a perimeter erosion control device. Perimeter erosion controls will remain in place at any time the stockpile is not being actively accessed and until vegetative cover is established. Erosion control devices shall be placed within 5-10 feet of the toe of slope.</p> <p>Once construction operations have been completed, the soil on the southern and northeastern portions of the pad will be seeded with the specified seed mix (see Appendix C). Establishing vegetative cover will help to stabilize the soil, reduce wind and water erosion, minimize sheet flow and rill erosion, increase infiltration rates, and reduce overall surface runoff. The reclamation area will be regularly monitored for noxious weed growth. Re-seeding will occur as necessary to achieve wide spread, uniform vegetative cover.</p> <p>Post seeding, a layer of straw or hay mulch will be installed via crimping along the stockpile, in order to promote seed germination and further stabilization of the soil. Mulching helps to mitigate the impacts of rainfall and increase soil moisture retention. Mulching will be monitored and re-applied as necessary, until vegetative growth is established.</p> <p>Erosion logs composed of excelsior, rocks, straw, coconut fibers, wood chips, or compost will be installed along the eastern perimeter of the permitted limit of disturbance. Erosion logs will aid in reducing flow velocities to mitigate rill erosion, and capture sediment to mitigate runoff. Erosion control logs will remain in place until the pad is stabilized.</p> <p>Erosion control blankets will be composed of degradable materials including straw, wood, coconut fibers or a mixture will be installed along the eastern slopes of the pad. Erosion blankets will aid in minimizing erosion on slopes and reducing moisture loss. Erosion control blankets will remain in place until the pad is stabilized.</p> <p>A temporary barrier composed of porous fabric that is stretched across and held up by wooden posts will be placed along the north, west, and southern edge of the pad. Silt fencing will aid in sediment control by allowing sediment within surface runoff to settle before leaving the pad. Silt fencing will remain in place until the pad is stabilized.</p>	
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Total: 14 comment(s)



**ATTACHMENT LIST**

<b><u>Att Doc Num</u></b>	<b><u>Name</u></b>
2473662	CDPHE CONSULTATION
2473663	DIRECTOR'S RECOMMENDATION
2473690	LOCAL/FED FINAL PERMIT DECISION
2473691	INFORMED CONSENT LETTER
2473692	INFORMED CONSENT LETTER
2473693	INFORMED CONSENT LETTER
2473694	CORRESPONDENCE
2473695	OTHER
403099558	FORM 2A SUBMITTED
403131250	SURFACE AGRMT/SURETY
403277421	LOCAL/FED FINAL PERMIT DECISION
403305597	SURFACE PLAN
403305615	NRCS MAP UNIT DESC
403305716	LGD CONSULTATION
403516776	LAYOUT DRAWING
403516781	ACCESS ROAD MAP
403516784	WILDLIFE HABITAT DRAWING
403516808	DIRECTIONAL WELL PLAT
403517591	CULTURAL FEATURES MAP
403517849	LOCATION AND WORKING PAD GIS SHP
403517860	PRELIMINARY PROCESS FLOW DIAGRAMS
403518727	LOCATION PICTURES
403518737	RELATED LOCATION AND FLOWLINE MAP
403518742	LOCATION DRAWING
403518753	GEOLOGIC HAZARD MAP
403519313	ALA DATASHEET
403519315	ALA NARRATIVE SUMMARY
403519360	HYDROLOGY MAP
403519361	CONSULTATION SUMMARY
403551936	CPW WAIVER
403556203	CORRESPONDENCE

Total Attach: 31 Files

### General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
OGLA	With operator concurrence, the following was added: USFWS Correspondence. USFWS general take permit.	09/25/2024
OGLA	With operator concurrence, the following has been corrected: Rule 604.b.(1) box has been checked for Informed Consent. Three Informed Consent Letters have been attached. City of Thornton Final Determination Letter has been attached.	09/25/2024
OGLA	The Director has determined that the OGDG application that this Form is a component of meets all requirements of Rule 306.a. The Director's Recommendation has been attached to the Form 2A.	12/01/2023
OGLA	Added CDPHE BMPs after Consultation that occurred on 10/27/2023.	11/06/2023
OGLA	Added the following BMP per operator request: Operator will install two (2) wash lines in the mud-gas separator and use a tank to prevent clogging during drilling operations.	11/03/2023
OGLA	The Director has determined this OGDG application is complete. Form pushed to IN PROCESS.	10/10/2023
OGLA	The Conditions of Approval (COA) and Best Management Practices (BMPs) on the Form 2A and the Final Order are the final enforceable permit conditions for this Oil and Gas Location. Any plan or attachment that contains information or language that is contrary to or less protective than ECMC rules or the COAs and BMPs on the Form 2A or Final Order does not relieve the operator from compliance with the applied COAs, BMPs or any ECMC rules.	10/10/2023
OGLA	Returned to DRAFT for the following reasons: Attachment corrections.	10/05/2023
OGLA	Returned to DRAFT for the following reasons: Datafield corrections. Plan and attachment corrections.	06/05/2023

Total: 9 comment(s)

## Public Comments

The following comments were provided by members of the public and were considered during the technical review of this application.

No.	Comment	Comment Date
1	<p data-bbox="118 279 735 310">Dear Energy and Carbon Management Commission,</p> <p data-bbox="118 338 1284 485">We, Scannell Properties, LLC (Scannell), have under contract to acquire, a total of 6 vacant parcels totaling a gross, ±123.37 acres (Parcel Nos. 157311000023, 157311000022, 157311200001, 157311000024, 157311000020, 157311000004) at the intersection of Washington Street and 160th Avenue in City of Thornton. Scannell intends to develop a warehouse/light industrial project called Sack Creek II on this site.</p> <p data-bbox="118 516 1318 779">We understand that Extraction Oil &amp; Gas, Inc. ("Extraction"), a wholly-owned subsidiary of Civitas Resources, Inc., has executed with the City of Thornton ("City") an Operator Agreement that authorizes new oil and gas development from ten (10) horizontal oil and gas wells at a well-pad known as Washington Pad, which is south of our target development area. We further understand that Extraction has submitted an Oil and Gas Development ("OGDP") application for the Washington Pad project pending in Energy and Carbon Management Commission ("ECMC") Docket No. 230100033. We further understand that as part of the Operator Agreement authorizing new oil and gas development at the Washington Pad, Extraction has agreed to decommission certain legacy oil and gas facilities in the vicinity of the Washington Pad.</p> <p data-bbox="118 810 1308 1251">We write to express our support for the Operator Agreement, any and all remaining city permits that may be required to be issued to effectuate the Washington Pad project, and all state permits, including an approved OGDP permit and associated approvals authorizing new oil and gas development, including the proposed wells, from the Washington Pad. We recognize that Extraction has no legal obligation to decommission legacy oil and gas facilities in the area absent Extraction contractually agreeing to do so on its own volition. We therefore benefit from Extraction's approved Operator Agreement and would benefit from an approved OGDP because the proposed energy project at the Washington Pad does not affect our development plans negatively in any way and instead our development plans are beneficially affected by Extraction decommissioning the legacy oil and gas infrastructure. In particular, we understand that with the approved Operator Agreement and subsequent city and state permits approving Extraction's oil and gas development for the Washington Pad, Extraction would plug and abandon an oil and gas well and remove that well's associated tanks and facilities and pipeline, which is on the Sack Creek II parcel. We appreciate Extraction's efforts to find the best available location to propose new oil and gas development and believe the Washington Pad location is best for us and the City.</p>	11/08/2023

Total: 1 comment(s)