

FORM  
2A

Rev  
08/13

State of Colorado  
Oil and Gas Conservation Commission

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



Document Number:

401120263

Date Received:

01/04/2018

Oil and Gas Location Assessment

New Location     Refile     Amend Existing Location    Location#: 332117

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

Location ID:

**332117**

Expiration Date:

**08/23/2021**

This location assessment is included as part of a permit application.

CONSULTATION

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

Operator

Operator Number: 10633  
Name: CRESTONE PEAK RESOURCES OPERATING LLC  
Address: 1801 CALIFORNIA STREET #2500  
City: DENVER    State: CO    Zip: 80202

Contact Information

Name: Toby Sachen  
Phone: (720) 410-8536  
Fax: ( )  
email: toby.sachen.contractor@crestone pr.com

RECLAMATION FINANCIAL ASSURANCE

- Plugging and Abandonment Bond Surety ID: 20160104     Gas Facility Surety ID: \_\_\_\_\_
- Waste Management Surety ID: \_\_\_\_\_

LOCATION IDENTIFICATION

Name: Cosslett    Number: 22H-B168  
County: WELD  
Quarter: NWNE    Section: 22    Township: 1N    Range: 68W    Meridian: 6    Ground Elevation: 5172

Define a single point as a location reference for the facility location. When the location is to be used as a well site then the point shall be a well location.

Footage at surface: 850 feet FNL from North or South section line  
2205 feet FEL from East or West section line

Latitude: 40.041596    Longitude: -104.987921

PDOP Reading: 1.6    Date of Measurement: 03/24/2015

Instrument Operator's Name: Jason Dahlman

## 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 #** 435499 **FORM 2A DOC #** \_\_\_\_\_

Well Site is served by Production Facilities

\_\_\_\_\_

## FACILITIES

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

Wells	<u>12</u>	Oil Tanks*	_____	Condensate Tanks*	_____	Water Tanks*	_____	Buried Produced Water Vaults*	_____
Drilling Pits	_____	Production Pits*	_____	Special Purpose Pits	_____	Multi-Well Pits*	_____	Modular Large Volume Tanks	<u>3</u>
Pump Jacks	_____	Separators*	<u>12</u>	Injection Pumps*	_____	Cavity Pumps*	_____	Gas Compressors*	_____
Gas or Diesel Motors*	_____	Electric Motors	_____	Electric Generators*	_____	Fuel Tanks*	_____	LACT Unit*	_____
Dehydrator Units*	_____	Vapor Recovery Unit*	_____	VOC Combustor*	_____	Flare*	_____	Pigging Station*	<u>2</u>

## OTHER FACILITIES\*

### Other Facility Type

### Number

Meter House (KMG)	<u>1</u>
Water Surge Drum	<u>1</u>
Instrument Air Skid	<u>1</u>
Oil Surge Drum	<u>2</u>
Electrical Rack and Equipment	<u>1</u>
Oil Pump Skids	<u>2</u>
Water Pump Skid	<u>1</u>

\*Those facilities indicated by an asterisk (\*) shall be used to determine the distance from the Production Facility to the nearest cultural feature on the Cultural Setbacks Tab.

Per Rule 303.b.(3)C, description of all oil, gas, and/or water pipelines:

Oil, water and gas will flow combined to the facilities pad from the well pad. The flowline is 3" FCA3 steel, epoxy coated, welded and pressure tested. It will be buried 4' deep. Gas pipeline will be determined by KMG at a later date. The produced oil, water, and gas from the wellhead flow through a 3" flowline (welded steel construction, epoxy coated, pressure tested) to the wellpad facilities.

Oil and produced water flow, in dedicated flowlines, from the wellpad facilities to the Hub which is approximately 1 mile to the southwest. These oil and water flowlines are 4-8" in diameter, constructed of steel or pressure and temperature rated steel-reinforced poly.

## CONSTRUCTION

Date planned to commence construction: 09/01/2018 Size of disturbed area during construction in acres: 18.00

Estimated date that interim reclamation will begin: 03/01/2019 Size of location after interim reclamation in acres: 7.00

Estimated post-construction ground elevation: 5172

## DRILLING PROGRAM

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

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

Will salt sections be encountered during drilling: No

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

Will oil based drilling fluids be used? Yes

## DRILLING WASTE MANAGEMENT PROGRAM

Drilling Fluids Disposal: OFFSITE Drilling Fluids Disposal Method: Commercial Disposal

Cutting Disposal: OFFSITE Cuttings Disposal Method: Commercial Disposal

Other Disposal Description:

Beneficial reuse or land application plan submitted?         

Reuse Facility ID:          or Document Number:         

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

## SURFACE & MINERALS & RIGHT TO CONSTRUCT

Name: Erie Exchange LLC

Phone:         

Address: 5040 Acoma Street

Fax:         

Address:         

Email:         

City: Denver State: CO Zip: 80216-2015

Surface Owner:  Fee  State  Federal  Indian

Check all that apply. The Surface Owner:  is the mineral owner

is committed to an oil and Gas Lease

has signed the Oil and Gas Lease

is the applicant

The Mineral Owner beneath this Oil and Gas Location is:  Fee  State  Federal  Indian

The Minerals beneath this Oil and Gas Location will be developed from or produced to this Oil and Gas Location: Yes

The right to construct this Oil and Gas Location is granted by: Surface Use Agreement

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

Date of Rule 306 surface owner consultation 07/29/2014

## CURRENT AND FUTURE LAND USE

Current Land Use (Check all that apply):

Crop Land:  Irrigated  Dry land  Improved Pasture  Hay Meadow  CRP

Non-Crop Land:  Rangeland  Timber  Recreational  Other (describe):         

Subdivided:  Industrial  Commercial  Residential

Future Land Use (Check all that apply):

Crop Land:  Irrigated  Dry land  Improved Pasture  Hay Meadow  CRP

Non-Crop Land:  Rangeland  Timber  Recreational  Other (describe):         

Subdivided:  Industrial  Commercial  Residential

## CULTURAL DISTANCE INFORMATION

Provide the distance to the nearest cultural feature as measured from Wells or Production Facilities onsite.

	<b>From WELL</b>	<b>From PRODUCTION FACILITY</b>
Building:	1283 Feet	1144 Feet
Building Unit:	2022 Feet	1762 Feet
High Occupancy Building Unit:	5280 Feet	5280 Feet
Designated Outside Activity Area:	5280 Feet	5280 Feet
Public Road:	908 Feet	1083 Feet
Above Ground Utility:	885 Feet	1134 Feet
Railroad:	5280 Feet	5280 Feet
Property Line:	397 Feet	92 Feet

### INSTRUCTIONS:

- All measurements shall be provided from center of nearest Well or edge of nearest Production Facility to nearest of each cultural feature as described in Rule 303.b.(3)A.  
- Enter 5280 for distance greater than 1 mile.  
- Building - nearest building of any type. If nearest Building is a Building Unit, enter same distance for both.  
- Building Unit, High Occupancy Building Unit, and Designated Outside Activity Area - as defined in 100-Series Rules.  
- For measurement purposes only, Production Facilities should only include those items with an asterisk(\*) on the Facilities Tab.

## DESIGNATED SETBACK LOCATION INFORMATION

Check all that apply. This location is within a:

- Buffer Zone  
 Exception Zone  
 Urban Mitigation Area

Pre-application Notifications (required if location is within 1,000 feet of a building unit):

Date of Rule 305.a.(1) Urban Mitigation Area Notification to Local Government: \_\_\_\_\_

Date of Rule 305.a.(2) Buffer Zone Notification to Building Unit Owners: \_\_\_\_\_

- Buffer Zone - as described in Rule 604.a.(2), within 1,000' of a Building Unit.  
- Exception Zone - as described in Rule 604.a.(1), within 500' of a Building Unit.  
- Urban Mitigation Area - as defined in 100-Series Rules.  
- Large UMA Facility - as defined in 100-Series Rules.

## FOR MULTI-WELL PADS AND PRODUCTION FACILITIES WITHIN DESIGNATED SETBACK LOCATIONS ONLY:

- Check this box if this Oil and Gas Location has or will have Production Facilities that serve multiple wells (on or offsite) and the Production Facilities are proposed to be located less than 1,000 feet from a Building Unit. *(Pursuant to Rule 604.c.(2)E.i., the operator must evaluate alternative locations for the Production Facilities that are farther from the Building Unit, and determine whether those alternative locations were technically feasible and economically practicable for the same proposed development.)*
- By checking this box, I certify that no alternative placements for the Production Facilities, farther from the nearest Building Unit, were available based on the analysis conducted pursuant to Rule 604.c.(2)E.i.

In the space below, explain rationale for siting the multi-well Production Facility(ies) that supports your Rule 604.c.(2)E.i determination. Attach documentation that supports your determination to this Form 2A.

## SOIL

List all soil map units that occur within the proposed location. attach the National Resource Conservation Service (NRCS) report showing the "Map Unit Description" report listing the soil typical vertical profile. This data is to be used when segregating topsoil.

The required information can be obtained from the NRCS web site at <http://soildatamart.nrcs.usda.org/> or from the COGCC web site GIS Online map page found at <http://colorado.gov/cogcc>. Instructions are provided within the COGCC web site help section.

NRCS Map Unit Name: 40-Nunn loam, 1 to 3 percent slopes  
NRCS Map Unit Name: 57-Renohill clay loam, 3 to 9 percent slopes  
NRCS Map Unit Name: 79-Weld loam, 1 to 3 percent slopes

**PLANT COMMUNITY:**

Complete this section only if any portion of the disturbed area of the location's current land use is on non-crop land.

Are noxious weeds present: Yes  No

Plant species from:  NRCS or,  field observation Date of observation: \_\_\_\_\_

List individual species: \_\_\_\_\_

Check all plant communities that exist in the disturbed area.

- Disturbed Grassland (Cactus, Yucca, Cheatgrass, Rye)
- Native Grassland (Bluestem, Grama, Wheatgrass, Buffalograss, Fescue, Oatgrass, Brome)
- Shrub Land (Mahogany, Oak, Sage, Serviceberry, Chokecherry)
- Plains Riparian (Cottonwood, Willow, Aspen, Maple, Poplar, Russian Olive, Tamarisk)
- Mountain Riparian (Cottonwood, Willow, Blue Spruce)
- Forest Land (Spruce, Fir, Ponderosa Pine, Lodgepole Pine, Juniper, Pinyon, Aspen)
- Wetlands Aquatic (Bullrush, Sedge, Cattail, Arrowhead)
- Alpine (above timberline)
- Other (describe): \_\_\_\_\_

**WATER RESOURCES**

Is this a sensitive area:  No  Yes

Distance to nearest

downgradient surface water feature: 616 Feet

water well: 176 Feet

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

Basis for depth to groundwater and sensitive area determination:

Ground water determination determined from CDWR report on Permit #170198 which indicates depth to ground water at 17 feet. Sensitive area determination based on depth to groundwater.

Is the location in a riparian area:  No  Yes

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

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

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

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

Federal (FEMA)

State

County

Local

Other \_\_\_\_\_

**GROUNDWATER BASELINE SAMPLING AND MONITORING AND WATER WELL SAMPLING**

Water well sampling required per Rule 318A

**WILDLIFE**

This location is included in a Wildlife Mitigation Plan

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

### DESIGNATED SETBACK LOCATION EXCEPTIONS

Check all that apply:

- Rule 604.a.(1)A. Exception Zone (within 500' of a Building Unit) and is in an Urban Mitigation Area
- Rule 604.b.(1)A. Exception Location (existing or approved Oil & Gas Location now within a Designated Setback as a result of Rule 604.a.)
- Rule 604.b.(1)B. Exception Location (existing or approved Oil & Gas Location is within a Designated Setback due to Building Unit construction after Location approval)
- Rule 604.b.(2) Exception Location (SUA or site-specific development plan executed on or before August 1, 2013)
- Rule 604.b.(3) Exception Location (Building Units constructed after August 1, 2013 within setback per an SUA or site-specific development plan)

### RULE 502.b VARIANCE REQUEST

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

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

### OPERATOR COMMENTS AND SUBMITTAL

Comments Pad reference point is the Cosslett 1F well.

Distances given on the cultural setbacks tab from the wells are as follows: Building - from Cosslett 1A well, Building Unit - from Cosslett 1L well, Property Line - from Cosslett 1L well, Public Road - from all wells, Above Ground Utility - from all wells, High Occupancy Building Unit - from Cosslett 1L well, and Railroad - from all wells.

A temporary completions area of approximately four acres will be utilized for 2-4 fresh water storage tanks to be used during completions operations. The state-licensed manufacturer for the subject site will either be MWS or Pinnacle Manufacturing. The tanks will hold between 40,000-42,000 barrels, are between 153'-158' in diameter, and plan to be on location for 84 days. Once completions operations are complete, this area will be completely reclaimed.

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct and complete.  
Signed: \_\_\_\_\_ Date: 01/04/2018 Email: toby.sachen.contractor@crestonepr.com  
Print Name: Toby Sachen Title: Contractor

Based on the information provided herein, this Application for Permit-to-Drill complies with COGCC Rules and applicable orders and is hereby approved.

COGCC Approved:  Director of COGCC Date: 8/24/2018

### Conditions Of Approval

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

<u>COA Type</u>	<u>Description</u>
	The Approved Form 2A permit will be posted at the location during construction, drilling, and completions operations.

### Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
1	Planning	Maximize equipment and wellhead setbacks from occupied buildings and residences to the extent feasible and practicable, as determined by Crestone Peak Resources.

2	Traffic control	A traffic plan shall be coordinated with the local jurisdiction prior to commencement of move in and rig up. Any subsequent modification to the traffic plan will be coordinated with the local jurisdiction.
3	General Housekeeping	All surface trash, debris, scrap or discarded material connected with the operations of the property shall be removed from the premises or disposed of in a legal manner.
4	General Housekeeping	The well site will be cleared of all non-essential equipment, trash and debris after ninety days of a well P&A.
5	General Housekeeping	Crestone Peak Resources will identify plugged and abandoned wellbores according to Rule 319.a.(5). including the location of the wellbore with a permanent monument as specified in Rule 319.a.(5). Crestone Peak Resources will also inscribe or imbed the well number and date of plugging upon the permanent monument.
6	General Housekeeping	Crestone Peak Resources will install down cast lighting or some other form of lighting that mitigates light pollution and spill-over onto adjacent properties; provided, however, that Crestone Peak Resources may still use lighting that is necessary for public and occupational safety. Crestone Peak Resources will have light filtering mesh placed in the drilling rig derrick. All of the derrick lights will be tinted with automobile tint, and all drill rig working floor lighting will be cast downward. There will be 40 ft walls so the lighting on the floor will be below any view shed from the public on that pad.
7	General Housekeeping	Crestone Peak Resources will recycle and reuse water at the pad sites and otherwise minimize waste water production to the extent that it determines such recycling, reuse, and waste water minimization is technically and economically feasible.
8	Material Handling and Spill Prevention	"• Annual hydrostatic test on the oil dump line from the separator to the tank battery. • Annual hydrostatic "static" tests on our oil tanks. • Annual hydrostatic "static" tests on our produced water tank and water dump line from the separator to the produced water tank. • Lease Operator inspections of all equipment not to exceed 48 hours. • Monthly documented inspections (EU). • Annual environmental inspections of all battery and well equipment and pads. • Annual UT inspections of the pressure vessels and input into Crestone Peak Resources's RIPL Predictive Integrity Maintenance Program. (HLP separators and fuel gas separators)"
9	Material Handling and Spill Prevention	Well effluent containing more than ten (10) barrels per day of condensate or within two (2) hours after first encountering hydrocarbon gas of salable quality will be directed to a combination of sand traps, separators, surge vessels, and tanks as needed to ensure safe separation of sand, hydrocarbon liquids, water, and gas and to ensure salable products are efficiently recovered for sale or conserved and that non-salable products are disposed of in a safe and environmentally responsible manner.
10	Material Handling and Spill Prevention	All loadlines will be capped for every location in the DJ.

11	Material Handling and Spill Prevention	<p>Integrity testing of flowlines connecting wellheads to the separators:  <b>CONSTRUCTION PHASE:</b> The flowlines that Crestone uses are designed/constructed/tested to ASME B31.3/4/8 and API 1104 standards. Only materials with Material Test Reports (MTRs) provided by the pipeline supplier are used in the construction of the flowlines. Construction is tested with 100% x-ray and goes through hydrotest per the applicable B31-code.  <b>OPERATIONS PHASE:</b> Pressure testing of the flowlines is conducted on an annual basis. Additionally, Crestone is already in compliance with 1104.i. Continuous Pressure Monitoring Requirements of the 1100 Series Flowline Regulations. Crestone utilizes a series of standard operating procedures to define our flowline integrity testing program.</p> <p>2. Frequency on valve and fitting inspections: Crestone Lease Operators inspect all equipment on their locations at a minimum of once every 48 hours, but most sites are inspected every 24 hours. Valves and fittings inspections are part of the daily job duties of our lease operators. Any valve or fitting that is found to be leaking is either repaired immediately by the lease operator or shut-in procedures are implemented as described below. Additionally, lease operators conduct a documented monthly inspection of the facility and this includes inspection of all valves and fittings.</p> <p>3. Description of Lease Operator Inspections, Monthly Documented Inspections &amp; Environmental Inspections: The Crestone lease operator inspections are done as a routine part of the lease operators job. The lease operator would typically visit each of their assigned locations daily. They conduct a visual inspection of the facility which includes all valves, fittings, wellhead, tanks, vapor control systems and all connections. The lease operator also checks our Cygnet automation system for system pressures and flows. Pressure and flow sensors are placed on multiple points throughout the system and are specifically designed to measure the system for irregularities that would indicate a leak in the system or change in production of oil, water, or gas. The Cygnet system is also set-up with alarms that are triggered by anomalous pressure or flows. Low pressure warnings can activate automatic shut-in of the well and system. The monthly documented inspection is done using an electronic form that is recorded in the EU system. This thorough inspection and documentation requires the lease operator to inspect all aspects of the site and then triggers work orders for any leaks, or housekeeping issues. This inspection would note any leaks of either gas or fluids which triggers an immediate repair or shut-in. The Lease operators also conduct a weekly CDPHE Regulation 7 – Audible, Visual, and Olfactory (AVO) inspection, which focus on the tanks and vapor control system. The Regulation 7 AVO is also a documented inspection. In addition, the sites are inspected with optical gas imaging cameras on a routine schedule, annually for compliance purposes with our Spill Prevention Containment and Countermeasures (SPCC) plan, depending on the status of reclamation the sites are also inspected on either a 14-day, 30-day, annual or rain triggered event in accordance with both the COGCC and the CDPHE Stormwater Management Plans (SWMP).</p> <p>4. Measures for when leaks are discovered:  If we suspect a leak we shut in the well and hydrotest the line. If it passes, then the well is brought back onto production.  If there is an actual leak, well is kept shut in while leak is found and fixed. Not until the line has passed hydrotesting, would the well be brought back online.</p>
12	Construction	<p>The pad will be constructed in such a manner that noise mitigation may be installed and removed without disturbing the site or landscaping.</p>
13	Construction	<p>Crestone Peak Resources utilizes 24" tall corrugated galvanized metal berm walls with a capacity in excess of 150% of the largest tank contained within the wall. In addition, Crestone Peak Resources best practices mandates the use of impervious liners that extends under each storage tank and up the walls, permanently affixed to the top of the metal berm wall. Protrusions of piping that come through the liner include a fully sealed "boot" to prevent leakage.</p>
14	Construction	<p>Crestone Peak Resources will install fencing to restrict access to wellheads and equipment.</p>

15	Construction	At the time of construction, all leasehold roads will be constructed to accommodate local emergency vehicle access requirements, and will be maintained in a reasonable condition.
16	Construction	803 - To the extent practicable, site lighting shall be directed downward and inward and shielded so as to avoid glare on public roads and Building Units within one thousand (1000) feet.
17	Construction	Crestone certifies that the MLVTs are designed and implemented consistent with the June 13, 2014 "Policy on the Use of Modular Large Volume Tanks in Colorado." Please see attached map for the location of the tanks.
18	Noise mitigation	Crestone will perform a baseline noise survey prior to any operational activity measuring dBA at a distance 350 feet from the noise source or sound levels will be measured at a point twenty-five (25) feet from the structure towards the noise source. In situations where measurement of noise levels at three hundred and fifty (350) feet is impractical or unrepresentative due to topography, the measurement may be taken at a lesser distance and extrapolated to a 350-foot equivalent using the formula stated in Rule 802 of the State of Colorado Oil and Gas Conservation Commission. As necessary, based on the survey, Crestone will install temporary sound walls to minimize noise and light impacts during drilling and completions and will install permanent noise mitigation at the facility location as necessary to meet all COGCC regulations. Crestone will not exceed 60 dBA from the measurement point as Rule 802 per the agreement with Erie.
19	Noise mitigation	Crestone Peak Resources will install 40 ft walls, using the SK8 panels and will box in all auxiliary equipment. We will have quash material in the noisier equipment containers to absorb the 'C' scale sound waves and we will perform ambient sound analysis the prior to construction / drilling activity.
20	Emissions mitigation	Green Completions -Test separators and associated flow lines, sand traps and emission control systems shall be installed on-site to accommodate green completions techniques. When commercial quantities of salable quality gas are achieved at each well, the gas shall be immediately directed to a sales line or shut in and conserved. If a sales line is unavailable or other conditions prevent placing the gas into a sales line, the operator shall not produce the wells without an approved variance per Rule 805.b. (3)C.
21	Emissions mitigation	Crestone Peak Resources will follow and comply with all leak detection and repair and storage tank emission management plan conditions as required by Colorado Air Quality Control Commission Regulation Number 7. This will include at least monthly Audible, Visual and Olfactory (AVO) inspections of the components and tanks at our Production Facilities at most weekly or at least monthly starting on January 1, 2015. In addition, Crestone Peak Resources will perform infra-red camera inspections of these components and the storage tanks at most monthly or at least annually.
22	Emissions mitigation	Current Crestone Peak Resources drilling operations into and through productive horizons are planned to keep a hydrostatic "over-balance" on the formation. Crestone Peak Resources does not intentionally drill ahead with flares and in cases where we do have flares, they are intermittent and only kept for the amount of time it takes to raise our drilling fluid weight to be over-balanced again. In more extreme cases of Well Control Operations, it's possible to encounter a prolonged flare. This is required in order to bring operations back to normal and ensure proper safety of the rig/rig crews involved during this operation. These flaring instances are rare, but do occur. Crestone Peak Resources typically has a good understanding of the pore pressures and will plan accordingly in order to help mitigate potential light impacts to nearby residents.

23	Emissions mitigation	<p>"Well leak detection and repair</p> <p>(a) To identify leaks, Crestone Peak Resources will perform audio, visual and olfactory inspections on a monthly basis at all of its new and existing wells and related facilities and equipment within Erie's Town Limits, provided that such related facilities and equipment are located on the pads for such wells, are part of adjacent tanks used for such pad sites, or are part of storage tanks for such pad sites authorized under Article IV, Section 4 of the Operator Agreement. Crestone Peak Resources will also inspect each such well with an infra-red camera on a monthly basis. The initial baseline inspections will occur within sixty (60) calendar days after the Effective Date. After a well has produced for twelve (12) months, the frequency of such inspections shall decrease from monthly to quarterly. If Crestone Peak Resources determines that any repairs are required based on these inspections, Crestone Peak Resources will promptly initiate these repairs.</p> <p>(b) Crestone Peak Resources will report to Erie on the inspection results and any associated repairs the month after the inspection or repair occurs. This information will be collectively reported on a monthly basis in the same format that Crestone Peak Resources uses for reporting to the Air Pollution Control Division under Regulation 7, but that is specific to wells located within the Erie Town Limits. Erie will make this information publicly available.</p> <p>(c) This BMP will terminate five (5) years after the Effective Date, after which Crestone Peak Resources will continue to comply with the leak detection, repair, and reporting requirements of Regulation 7, as such requirements may be amended.</p> <p>"</p>
24	Drilling/Completion Operations	Crestone Peak Resources will utilize a closed loop system for drilling operations at this location.
25	Drilling/Completion Operations	Crestone Peak Resources will not utilize pits.
26	Drilling/Completion Operations	Crestone Peak Resources will employ a rig without kelly that has double ram with blind and pipe ram and an annular preventer. At least one person at the well site during drilling operations will have Mineral Management certification or Director approved training for blowout prevention.
27	Drilling/Completion Operations	Upon initial rig-up and at least once every thirty (30) days during drilling operations thereafter, pressure testing of the casing string and each component of the blowout prevention equipment including flange connections will be performed to seventy percent (70%) of working pressure or seventy percent (70%) of the internal yield of casing, whichever is less. Pressure testing will be conducted and the documented results will be retained by the operator for inspection by the Director for a period of one (1) year. Activation of the pipe rams for function testing will be conducted on a daily basis when practicable.
28	Drilling/Completion Operations	All newly installed or replaced crude oil and condensate storage tanks will be designed, constructed, and maintained in accordance with National Fire Protection Association (NFPA) Code 30 (2008 version). Crestone Peak Resources will maintain written records verifying proper design, construction, and maintenance, and will make these records available for inspection by the Director. In addition, onsite inspections are conducted internally to insure guidelines are met.
29	Drilling/Completion Operations	Adequate blowout prevention equipment will be used on all well servicing operations.
30	Drilling/Completion Operations	Crestone Peak Resources shall use closed-loop systems for drilling and completion operations.

31	Drilling/Completion Operations	Crestone Peak Resources has developed and implemented a company-wide Responsible Products Program to manage the fluid products used in its hydraulic fracturing operations. This Responsible Products Program helps Crestone Peak Resources evaluate the hydraulic fracturing fluid products it uses in its operations for safety, effectiveness and potential public health and environmental impacts. As part of this program, Crestone Peak Resources has informed all of its hydraulic fracturing fluid product suppliers that any products containing diesel fuels (as defined by EPA 816-R-12-004), 2-Butoxyethanol (2-BE), benzene or heavy metals (i.e. lead, mercury, arsenic, cadmium and chromium) cannot be used in hydraulic fracturing at Crestone Peak Resources operations. Crestone Peak Resources will continue to conduct its hydraulic fracturing operations within the Erie town limits in accordance with its Responsible Products Program.
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Total: 31 comment(s)

### Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
2316302	HYDROLOGY MAP
401120263	FORM 2A SUBMITTED
401460191	ACCESS ROAD MAP
401460193	WASTE MANAGEMENT PLAN
401460196	LOCATION PICTURES
401460198	LOCATION DRAWING
401494486	NRCS MAP UNIT DESC
401494487	NRCS MAP UNIT DESC
401494488	NRCS MAP UNIT DESC
401496936	MULTI-WELL PLAN
401508253	SURFACE AGRMT/SURETY

Total Attach: 11 Files

## General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
OGLA	Per conversation with Operator - update noise mitigation BMP to concur with Erie agreement with the Operator.	08/24/2018
Permit	With operators concurrence changed construction date. Final Review Completed.	08/15/2018
OGLA	For OGLA supervisor review: Added green completions BMP. BMPs part of the MOU agreement between the Town of Erie and the Operator which are not enforceable by COGCC have been removed from the 2A. Operator indicated commercial development for future land use. Request more information on future land use. Operator responded that commercial use was for a large commercial retail store.	04/12/2018
OGLA	OGLA supervisor review: need more specific lighting, noise, and green completions BMP. Operator sent on 3/27 - added lighting and noise BMPs - forwarded green completions for Rule 805 and 912 to supervisor for review.	04/05/2018
Permit	Permitting Review Complete.	03/20/2018
OGLA	Operator responded via email – the railroad line on the topo is abandoned. Aerial imagery confirms the rail line is not continuous in the area. Operator stated the existing well on the location will be abandoned. Keep well count at 12 and cultural distances from the proposed wells and production equipment as that represents the final counts for the location. Updated hydrology map and distance to surface water. Send for OGLA supervisor review.	03/16/2018
OGLA	Operator provided correct WMP to attach, MLVT information, Railroad appears to be 1013 feet to the north has been abandoned. Operator concurs to remove Erie BMPs. Check again on if existing well will remain or be abandoned and distance to surface water, public road, and above ground utility.	02/26/2018
OGLA	Talk to OGLA supervisor regarding BMPs referencing Erie MOU. Send email to Operator regarding BMPs.	02/06/2018
OGLA	OGLA review – 2A has 12 wells – drawings have 13, Waste Management plan is for Encana, Cultural distances do not appear to be from existing and proposed wells, railroad to the north is not measured, surface water maybe closer than indicated on the 2A, comments section comments are not all applicable to this 2A or need to be a BMP, many BMPs reference an agreement between Crestone and Erie.	01/31/2018
Permit	Passed Completeness.	01/10/2018
Permit	Returned to draft for: - box on "Consultation & Contact Info" tab for "This location assessment is included as part of a permit application" is unchecked, but the "Related Forms" tab contains forms. The box should be checked - "Surface & Minerals" tab: right to construct is listed as "Surface Use Agreement", but there is none attached	01/09/2018

Total: 11 comment(s)