

FORM 2A Rev 04/18

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: 401550237 Date Received: 06/18/2018

Oil and Gas Location Assessment

[X] New Location [] Refile [] Amend Existing Location Location#: _____

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

Location ID: 459593 Expiration Date: 12/06/2021

[X] 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: Erin Lind Phone: (720) 410-8478 Fax: () email: erin.lind@crestonepr.com

FINANCIAL ASSURANCE

[X] Plugging and Abandonment Bond Surety ID (Rule 706): 20160104 [] Gas Facility Surety ID (Rule 711): _____ [] Waste Management Surety ID (Rule 704): _____

LOCATION IDENTIFICATION

Name: Goltl Number: 26H-O168 County: BROOMFIELD Quarter: SWSE Section: 26 Township: 1N Range: 68W Meridian: 6 Ground Elevation: 5173 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: 392 feet FSL from North or South section line 1724 feet FEL from East or West section line Latitude: 40.015972 Longitude: -104.967557 PDOP Reading: 1.2 Date of Measurement: 05/01/2017 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 # FORM 2A DOC #

Production Facilities Location serves Well(s)

435499

FACILITIES

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

Wells	<u>26</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>2</u>
Pump Jacks	_____	Separators*	<u>26</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*	_____

OTHER FACILITIES*

Other Facility Type

Number

Pump skid	<u>3</u>
Instrument Air Skid	<u>2</u>
Surge drums	<u>3</u>
Electric Transformer	<u>1</u>
Electrical Rack	<u>1</u>
Launchers	<u>3</u>
Sales Meter	<u>2</u>
Gas coolers	<u>2</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:

There will be 26 new well flowlines (3" schedule 80, X52, FBE pipe) flowing east and west from the wellheads to the facilities. There will be 2 instrument air lines from the wells to the facilities in the same ditch as the flowlines (2" schedule 80, X42/52, FBE pipe). In the event that separated fluids are transferred off of location for offsite processing, storage, and sales; these lines are constructed of materials designed to minimized internal and external corrosion and withstand maximum anticipated operation pressures and other loadings without impairment; constructed in compliance with API Standard 1104 and pressure tested to ASME B31.3.

CONSTRUCTION

Date planned to commence construction: 12/10/2018 Size of disturbed area during construction in acres: 31.10

Estimated date that interim reclamation will begin: 01/01/2020 Size of location after interim reclamation in acres: 3.00

Estimated post-construction ground elevation: 5173

DRILLING PROGRAM

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

Is H₂S 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? No

Reuse Facility ID: _____ or Document Number: _____

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

SURFACE & MINERALS & RIGHT TO CONSTRUCT

Name: Edna K Goltl Trust

Phone: _____

Address: PO Box 1227

Fax: _____

Address: _____

Email: _____

City: Erie State: CO Zip: 80516

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 06/09/2017

CURRENT AND FUTURE LAND USE

Current Land Use (Check all that apply):

Crop Land: Irrigated Dry land Improved Pasture Hay Meadow CRP

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

Subdivided: Industrial Commercial Residential

Future Land Use (Check all that apply):

Crop Land: Irrigated Dry land Improved Pasture Hay Meadow CRP

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

Subdivided: Industrial Commercial Residential

CULTURAL DISTANCE INFORMATION

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

	From WELL	From PRODUCTION FACILITY
Building:	1407 Feet	1864 Feet
Building Unit:	1522 Feet	1961 Feet
High Occupancy Building Unit:	5280 Feet	5280 Feet
Designated Outside Activity Area:	5280 Feet	5280 Feet
Public Road:	1714 Feet	1993 Feet
Above Ground Utility:	330 Feet	184 Feet
Railroad:	5036 Feet	5280 Feet
Property Line:	332 Feet	183 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: Ulm clay loam, 0 to 3 percent slopes. Map Unit #66

NRCS Map Unit Name: _____

NRCS Map Unit Name: _____

PLANT COMMUNITY:

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

Are noxious weeds present: Yes No

Plant species from: NRCS or, field observation Date of observation: _____

List individual species: _____

Check all plant communities that exist in the disturbed area.

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

WATER RESOURCES

Is this a sensitive area: No Yes

Distance to nearest

downgradient surface water feature: 338 Feet

water well: 995 Feet

Estimated depth to ground water at Oil and Gas Location 26 Feet

Basis for depth to groundwater and sensitive area determination:

Depth to groundwater taken from geotechnical

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 Reference point for location taken from the Goltl East 4G-26H O168

A permit is currently in review with the City and County of Broomfield through their USR process.

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 95 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: 06/18/2018 Email: erin.lind@crestonepr.com

Print Name: Erin Lind Title: Regulatory Analyst

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

COGCC Approved:  Director of COGCC Date: 12/7/2018

Conditions Of Approval

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

COA Type

Description

	The Approved Form 2A permit will be posted at the location during construction, drilling, and completions operations.
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Best Management Practices

No BMP/COA Type

Description

1	Traffic control	An access route from the highway or county road to the proposed oil and gas location has been prearranged. Required access road permits will be obtained before construction begins and any special requirements outlined by Broomfield will be followed. Emergency routes will be chosen prior to the commencement of operations and will be clearly marked and maintained throughout drilling, completion and production activities.
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2	General Housekeeping	Any material not in use that might constitute a fire hazard will be removed a minimum of twenty-five (25) feet from the wellhead, tanks and separator. Any electrical equipment installations inside the bermed area will comply with API RP 500 classifications and comply with the current national electrical code as adopted by the State of Colorado.
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 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 will also inscribe or imbed the well number and date of plugging upon the permanent monument.
6	General Housekeeping	Flammable liquids shall not be stored within fifty (50) feet of the wellbore, except for the fuel in the tanks of operating equipment or supply for injections pumps. Where terrain and location configuration do not permit maintaining this distance, equivalent safety measures should be taken.
7	General Housekeeping	Crestone Peak Resources places road base, rock and recycled asphalt to assist with dust abatement. During construction, drilling, completions and reclamations phases, Crestone monitors each site and if needed we will run water trucks.
8	Material Handling and Spill Prevention	All loadlines will be capped for every location in the DJ.
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	<p>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. The monthly documented inspection is done using an electronic form that is recorded in the EU system. This 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.</p> <p>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. 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>
11	Material Handling and Spill Prevention	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.

12	Material Handling and Spill Prevention	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.
13	Material Handling and Spill Prevention	Integrity testing of flowlines connecting wellheads to the separators: CONSTRUCTION PHASE: 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. OPERATIONS PHASE: 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.
14	Construction	The pad will be constructed in such a manner that noise mitigation may be installed and removed without disturbing the site or landscaping.
15	Construction	Subject pad will have all weather access roads to allow for operator and emergency response.
16	Construction	Crestone will install fencing to restrict access to wellheads and equipment. The type of fencing will be agreed upon with the City and County of Broomfield prior to installation.
17	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.
18	Construction	Crestone will comply with COGCC Rule 1002.f.(2). by utilizing BMPs at the oil and gas location to control stormwater runoff in a manner that minimizes erosion, transport of sediment offsite, site degradation and protects surface waters. Examples of engineering controls that could be used when needed are: o Surface roughening o Silt fence o Erosion control blanket o Temporary slope drain o Temporary outlet protection o Sediment control log o Vehicle tracking control o Sediment trap o Stabilized staging area
19	Construction	Crestone will comply with OSHA Regulations for all on-site lighting to ensure the safety of their employees and third-party contractors. During the drilling and completions phases, certain lighting mitigation will be used. Examples include tinting and applying mesh for shading. All lighting is temporary and mobile during those phases and are all directed downward.
20	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.
21	Noise mitigation	The subject location will be constructed to allow potential future noise mitigation installation without disturbance.

22	Noise mitigation	Crestone will utilize 32' sound walls on all four sides of the location during drilling and completion operations. Crestone will be using "Quiet Fleet" technology during completion operations. Crestone will, to the maximum extent practicable, use electricity for the drilling rig(s) used during the drilling phase and all permanent production equipment, such as compressors, motors and pump jacks, and shall utilize electric line power in order to mitigate noise and to reduce emissions.
23	Emissions mitigation	Flow lines, separators, and sand traps capable of supporting green completions as described in Rule 805 will be installed on subject location at which commercial quantities of gas are reasonably expected to be produced based on existing adjacent wells within 1 mile.
24	Emissions mitigation	Temporary flowback flaring and oxidizing equipment will include: adequately sized equipment to handle 1.5 times the largest flowback volume of gas experienced in a ten mile radius. If there is overrun, Crestone will shut in the well versus freely venting. First sign of salable gas will be turned down the line.
25	Emissions mitigation	Crestone 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, 2017. In addition, Crestone will perform infra-red camera inspections of these components and the storage tanks at most monthly or at least annually.
26	Odor mitigation	Crestone operations will be in compliance with the Department of Public Health and Environment, Air Quality Control Commission, Regulation No. 2 Odor Emission, 5 C.C.R. 1001-4, Regulation No. 3 (5 C.C.R. 1001-5), and Regulation No. 7 Section XVII.B.1 (a-c) and Section XII. Where possible, drilling rig and completion equipment engine exhaust will be directed away from occupied buildings to assist in mitigating potential odors. As necessary, Crestone may utilize chemical additives during drilling operations to mitigate odor impacts. Sealed tanks with pressure relief valves and emissions controls will be utilized for the production facilities.
27	Drilling/Completion Operations	Crestone 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.
28	Drilling/Completion Operations	Guy line anchors in the DJ Basin are not installed. Crestone will use an engineered base beam that we guy wire anchor the derricks to.
29	Drilling/Completion Operations	Closed-top tanks will utilize backpressure systems that exert a minimum of four (4) ounces of backpressure and a maximum that does not exceed the pressure rating of the tank to facilitate gathering and combustion of tank.
30	Drilling/Completion Operations	Crestone will utilize a closed-loop system for drilling operations at this location.
31	Drilling/Completion Operations	Crestone will not utilize pits.
32	Drilling/Completion Operations	Crestone will comply with the "COGCC Policy on the Use of Modular Large Volume Tanks in Colorado" dated June 13, 2014. Crestone certifies that the MLVTs on this location will be designed and implemented consistent with the COGCC Policy on the use of MLVTs in the state of Colorado.

Total: 32 comment(s)

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
2316439	HYDROLOGY MAP
2316440	LOCATION DRAWING
2316441	CORRESPONDENCE
401550237	FORM 2A SUBMITTED
401658169	SURFACE AGRMT/SURETY
401675914	ACCESS ROAD MAP
401675916	LOCATION DRAWING
401675917	LOCATION PICTURES
401675918	MULTI-WELL PLAN
401675919	NRCS MAP UNIT DESC
401677053	WASTE MANAGEMENT PLAN

Total Attach: 11 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final Review Completed.	12/07/2018
OGLA	OGLA supervisor reviewed BMPs and meets COGCC Rules. OGLA review complete and task passed.	10/25/2018
OGLA	Operator confirmed 2 MLVTs per drawing - updated facility list. Attached as additional location drawing. Attached correspondence.	10/24/2018
OGLA	Operator provided updated hydrology map and additional drawing with MLVT - email Operator to confirm number of MLVTs for the location. Depth to water is through based on geotechnical done with borings up to 25.5 feet below ground surface and groundwater was not encountered. Depth to groundwater is listed at 26 feet and could be deeper.	10/23/2018
OGLA	OGLA review: cultural distances are not from the nearest well, water resource section nearest well is list is domestic with depth of 810 feet and a yield of 8 gpm. Monitoring water well approximately 3600 feet northwest with a depth of 15 feet. Hydrology map water well information does not match 2A with depth to water at 25 feet. Missing MLVT information for vendor, size, and timing, MLVT not on the location drawing. Request clarification on mitigation measures for lighting, noise, and access road per LGD comment.	09/20/2018
OGLA	Operator response to the Public Comment question regarding waste: "All drilling fluid (oil or water base), cement returns and E&P exempt fluids go to Republic Services in Commerce City. Cuttings go to Waste Connections in Erie or Waste Management near the airport."	08/23/2018
LGD	CITY AND COUNTY OF BROOMFIELD COMMENTS ON THE GOLTL PAD FORMS 2A AND FORM 2 The City and County of Broomfield (Broomfield), through its Local Government Designee, requests that Crestone Peak Resources (Operator) address the following questions and that the conditions of the following referenced permits include conditions relevant to each of the answers to the questions and the comments below. 2A (Document Number 401550237) 1. The permit conditions should detail what are the 3 Modular Large Volume Tanks called out in the Facilities section of the Form 2A, whether or not these are temporary, and what these tanks will contain. 2. Under the Surface Minerals Right to Construct section, some of the checked items have changed from those in the 2A Form received by Broomfield. For example: In 'Check all that apply,' the 2A Form submitted to Colorado Oil and Gas Conservation Commission's (COGCC) does not indicate the surface owner is the mineral owner, is committed to an Oil and Gas Lease, or has signed the Oil and Gas Lease. Broomfield requests clarification from	07/24/2018

the COGCC regarding the removal of this statement from the Form 2A.

3. Best Management Practice (BMP) Number 28 in the 2A Form submitted to Broomfield has been removed from the 2A Form posted on to the COGCC's website. This Best Management Practice (BMP) states that 'All newly installed or replaced crude oil and condensate storage tanks will be designed, constructed, and maintained in accordance with NFPA Code 30.' Broomfield requests clarification from the COGCC regarding the removal of this statement from the Form 2A

4. Please include a Reference Area map associated with the 2A Form posted on COGCC's website. This map was included in the 2A Form submitted to Broomfield for review.

5. The Best Management Practices section of the Form 2A, should have a Best Management Practice for Construction, Drilling/Completion Operations, and Production stating that Crestone Peak Resources will also comport to the requirements of the City and County of Broomfield Use By Special Review regulations, and include all requirements set forth in these comments as conditions of the Form 2A Permit.

6. The site plan should include details regarding the fencing to be utilized during production including color, material, and height. The narrative notes Crestone's intent to work with staff. The fence should be subject to final approval by Broomfield and all of these fencing requirements should be made a condition of the Form 2A Permit.

7. The proposed access road travels along the south side of the site and then is adjacent to the FRICO ditch before crossing the ditch to access CR 11. The Comprehensive Plan anticipates a future open lands corridor with trail along the FRICO ditch. The presence of a roadway to access the well site is inconsistent with this vision and with the use of a trail along the side of the ditch. The access road should be moved farther west to provide more of a buffer between the future truck traffic/private drive and the FRICO ditch and future open lands corridor and can this should be made a condition of the Form 2A Permit.

8. Cut sheets for all on-site lighting to be utilized, including during the production phase. All lighting needs to be downward directed and fully shielded and this should be made a condition of the Form 2A Permit.

9. Were alternative sites considered? An alternative site analysis should be provided.

10. The Broomfield Comprehensive Plan action Step OG-7.1 includes designs and operating procedures which should be included on a well site proposed in Broomfield. Please respond with how Crestone is incorporating these elements into the application and can the following be made a condition of the Form 2A Permit:

a. Closed loop, pitless drilling, completions and production systems without permanent on-site storage tanks with any required venting through 98% effective emissions control devices

b. Operator will commit to using only state of the art technology

c. Drilling activities conducted with electricity provided by electric utility line power

d. Tier 4 or better diesel engines, diesel and natural gas co-fired engines, natural gas fired spark ignition engines, or electric line power used to power hydraulic fracturing pumps

e. Quiet Fleet noise mitigation for completions operations

f. Sound wall around well drilling and completion activities to mitigate noise and visual impacts

g. No open vents to the atmosphere during drilling, completions, and operations, unless specifically approved by Broomfield.

11. How is the operator addressing C scale noise/vibration and can this be made a condition of the Form 2A Permit?

12. Is the operator able to achieve sound level of 60 dB(A) at 500 feet from the new oil and

	<p>gas facilities for all phases of operation and 50 dB(A) at 1000 feet from the facilities and can this be made a condition of the Form 2A Permit?</p> <p>13. Would the operator agree to no unloading of tubular goods between 9 PM and 8 AM as indicated as a desired action step in the Comprehensive Plan to meet goals of Community Impacts Mitigation and can this be made a condition of the Form 2A Permit?</p> <p>14. Please provide an ambient noise survey for the facility pre-construction. The Comprehensive Plan includes this as a desired action step to meet the goals related to Community Impacts Mitigation. The Comprehensive Plan also requests a noise survey during active drilling, hydraulic fracturing, flowback and operations. Is operator able to provide such noise surveys and can this be made a condition of the Form 2A Permit?</p> <p>Form 2s</p> <p>1. Broomfield requests that the COGCC take a close look at the offset well evaluations provided by Crestone Peak Resources to verify the estimates of offset distances of existing wells (including plugged and abandoned wells) from the new proposed horizontal wells.</p> <p>2. According to the OFFSET WELL EVALUATIONS spreadsheet provided in the Form 2s, there are plugged and abandoned wells and producing wells that have horizontal offsets of less than 150 feet from the proposed new horizontal wells and it is indicated that No Remediation Is Required for these wells. Broomfield requests that the COGCC take a close look to verify the proposed mitigation measures indicated by Crestone Peak Resources are appropriate as defined by the DJ Basin Horizontal Offset Policy.</p> <p>3. The Best Management Practices section of the Form 2s should have a BMP for Construction, Drilling/Completion Operations, and Production stating that Crestone Peak Resources will also comport to the requirements of the City and County of Broomfield Use By Special Review regulations.</p>	
OGLA	Public comment period extended 10 days under Rule 305.d.(1).A at the request of the Broomfield LGD.	06/27/2018
Permit	Passed Completeness.	06/25/2018

Total: 9 comment(s)