

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

Document Number:

401513944

Date Received:

03/12/2018

Oil and Gas Location Assessment

☒ New Location ☐ Refile ☐ Amend Existing Location Location#: _____

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

Location ID:

455598

Expiration Date:

06/21/2021☒ 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: Meghan Campbell

Phone: (720) 410-8487

Fax: ()

email: meghan.campbell@crestonepr.com

RECLAMATION FINANCIAL ASSURANCE

- ☒ Plugging and Abandonment Bond Surety ID: 20160104 ☐ Gas Facility Surety ID: _____
- ☐ Waste Management Surety ID: _____

LOCATION IDENTIFICATION

Name: Hingley

Number: 18H-A167

County: WELD

QuarterQuarter: NENE Section: 18 Township: 1N Range: 67W Meridian: 6 Ground Elevation: 5054

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: 514 feet FNL from North or South section line

617 feet FEL from East or West section line

Latitude: 40.057007 Longitude: -104.926172

PDOP Reading: 1.3 Date of Measurement: 10/31/2017

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 #

FACILITIES

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

Wells	11	Oil Tanks*		Condensate Tanks*	26	Water Tanks*	4	Buried Produced Water Vaults*	
Drilling Pits		Production Pits*		Special Purpose Pits		Multi-Well Pits*		Modular Large Volume Tanks	2
Pump Jacks		Separators*	11	Injection Pumps*		Cavity Pumps*		Gas Compressors*	
Gas or Diesel Motors*		Electric Motors		Electric Generators*		Fuel Tanks*		LACT Unit*	1
Dehydrator Units*		Vapor Recovery Unit*	8	VOC Combustor*	12	Flare*		Pigging Station*	

OTHER FACILITIES*

Other Facility Type

Number

Buffer Vessel	1
Closed Drain Tank	1
Water Vapor Knockout	1
Sales Gas Scrubber	1
Automation Rack	1
Pig Launcher	1
Off Sepr LP Separator	1
Meter Houses - Gas	2
Instrument Air Skid	1
Vapor Recover Towerr	1
Bulk treater	1
Oil Vapor Knockout	1
Chemical Tote and Injection Pump	1

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 11 new well flowlines. Gross produced well production fluids are transferred to the wellpad facilities in a welded epoxy-coated steel line, constructed in compliance with API Standard 1104 and pressure tested to ASME B31.3.
There will be 1 instrument air line from the wells to the facilities. Same ditch as the flowlines (2" schedule 80, X42/52, FBE pipe).

CONSTRUCTION

Date planned to commence construction: 07/26/2018 Size of disturbed area during construction in acres: 21.50
Estimated date that interim reclamation will begin: 01/26/2019 Size of location after interim reclamation in acres: 8.20
Estimated post-construction ground elevation: 5054

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: Bridle Creek LLC

Phone: _____

Address: 403 Madison Ave N

Fax: _____

Address: Suite 230

Email: _____

City: Bainbridge Island State: WA Zip: 98110

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 08/01/2015

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:	1276 Feet	733 Feet
Building Unit:	2478 Feet	1995 Feet
High Occupancy Building Unit:	5280 Feet	5280 Feet
Designated Outside Activity Area:	5280 Feet	5280 Feet
Public Road:	507 Feet	98 Feet
Above Ground Utility:	400 Feet	134 Feet
Railroad:	5280 Feet	5280 Feet
Property Line:	513 Feet	107 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: Nunn Loam, 1 to 3% slopes

NRCS Map Unit Name: Ulm Clay Loam, 3-5% slopes

NRCS Map Unit Name: _____

PLANT COMMUNITY:

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

Are noxious weeds present: Yes ☐ No ☒

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

List individual species:

Check all plant communities that exist in the disturbed area.

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

WATER RESOURCES

Is this a sensitive area: ☐ No ☒ Yes

Distance to nearest

downgradient surface water feature: 145 Feet

water well: 2172 Feet

Estimated depth to ground water at Oil and Gas Location 50 Feet

Basis for depth to groundwater and sensitive area determination:

Depth to groundwater determined by using a combination of COGCC GIS Online mapping and the State of Colorado DWR site. This site has been determined sensitive as it falls within 1000' of a surface water body.

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 is well 1A-18H-A167.

Up to two temporary tanks will be located on the temporary completions pad at this site. Tanks will be onsite for the duration of completions, approximately 60 days.

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

Signed:

Date: 03/12/2018

Email: meghan.campbell@crestonepr.com

Print Name: Meghan Campbell

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: 6/22/2018

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	Planning	Crestone Peak Resources will comply with terms agreed upon in Operator Agreement with Dacono for this location.
2	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 the municipality 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.
3	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. 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 will be taken.
4	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. Additionally, 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 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.

6	Storm Water/Erosion Control	<p>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:</p> <ul style="list-style-type: none"> 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
7	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.
8	Material Handling and Spill Prevention	<p>Flowlines, Leaks- Measures for when leaks are discovered:</p> <ul style="list-style-type: none"> - 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.
9	Material Handling and Spill Prevention	Flowline Inspections - 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.
10	Construction	The pad will be constructed in such a manner that noise mitigation may be installed and removed without disturbing the site or landscaping.
11	Construction	Subject pad will have all weather access roads to allow for operator and emergency response.
12	Construction	Crestone 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 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.
13	Construction	Crestone will install fencing to restrict access to wellheads and equipment. ("Fencing style will be installed as required by the town".)
14	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.
15	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.

16	Noise mitigation	The subject location will be constructed to allow potential future noise mitigation installation without disturbance.
17	Noise mitigation	Crestone has utilized baseline sound modeling of all equipment, including drilling rigs and hydraulic fracture stimulation equipment, to be used onsite. Crestone will design and construct noise mitigation based on the results of the modeling and account for nearby noise receptors to ensure compliance with COGCC Rule 802. Onsite noise mitigation may include sound walls, electrification of equipment, and hay bales. Noise mitigation measures will be installed prior to commencement of drilling and completing the wells on the pad.
18	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.
19	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.
20	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.
21	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.
22	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 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.
23	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.
24	Drilling/Completion Operations	Crestone will utilize a closed-loop system for drilling operations at this location. Crestone will not utilize pits.

Total: 24 comment(s)

Attachment Check List

Att Doc Num	Name
2316332	LOCATION DRAWING
401513944	FORM 2A SUBMITTED
401564211	ACCESS ROAD MAP
401564225	WASTE MANAGEMENT PLAN
401564227	MULTI-WELL PLAN
401564230	NRCS MAP UNIT DESC
401564232	NRCS MAP UNIT DESC
401564235	SURFACE AGRMT/SURETY
401564554	OTHER
401571043	HYDROLOGY MAP
401582358	LOCATION PICTURES

Total Attach: 11 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final review complete.	06/20/2018
OGLA	Operator provided location drawing with top soil pile - replaced attachment. Location is not a designated setback location. Operator provided BMPs for sensitive surface water. OGLA review complete and task passed.	06/19/2018
OGLA	Requested location drawings showing the entire disturbed area including top soil piles on 5/23/2018 - Operator said they would revise. have not received as of 6/7/18 - contact Operator on 6/15 for revised drawing.	06/07/2018
Permit	Permitting review complete, pending review of associated APDs.	05/31/2018
OGLA	Should be noted as there is not a SWH or RSO for a CPW consult, the CPW comment is a public comment and not part of the consultation process for this 2A.	05/21/2018
OGLA	Operator sent new location drawing with 2 MLVT (replaced) - added MLVTs to facilities list on the 2A. Added stormwater BMP. Requested disturbed area size.	05/21/2018
OGLA	Location does not have a mapped SWH or RSO, therefore a CPW consult is not necessary - unchecked the box. Spoke with the Operator regarding CPW consult - Operator is being conservative regarding potential migratory birds or raptors and wanted to place a BMP regarding wildlife. Facilities list has 26 condensate tanks but no mention of oil tanks or oil pipelines, disturbed area is 21 acres, but location drawing is closer to 12 acres, BMP references MLVTs, but no MLVTs on facility list or drawings, BMP #15 is a duplicate - remove, request stormwater/erosion BMP for nearby surface water and flaring/Rule 805 BMP.	05/09/2018
Permit	Passed Completeness.	04/04/2018
Permit	Returned to draft per operator's request.	03/19/2018

Total: 9 comment(s)