

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:

401513954

(SUBMITTED)

Date Received:

03/20/2018

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:

Expiration Date:

☒ 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-N167

County: WELD

Quarter: SESW Section: 18 Township: 1N Range: 67W Meridian: 6 Ground Elevation: 5109

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: 523 feet FSL from North or South section line

1359 feet FWL from East or West section line

Latitude: 40.045389 Longitude: -104.937645

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*	1

OTHER FACILITIES*

Other Facility Type

Number

Automation Rack	1
Bulk Treater	1
Chemical Tote and Injection Pump	1
Closed Drain Tank	1
Instrument Air Skid	1
Meter Houses - Gas	2
Off Spec LP Separator	1
Oil Vapor Knockout	1
Sales Gas Scrubber	1
Vapor Recovery Tower	1
Water Vapor Knockout	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).

MLVTs will be located on the temporary completions site. Each MLVT will hold approximately 40,000 bbls of freshwater and will be installed 1-2 weeks prior to completion operations and will remain onsite for the duration of completions for all wells.

CONSTRUCTION

Date planned to commence construction: 08/15/2018

Size of disturbed area during construction in acres: 15.50

Estimated date that interim reclamation will begin: 01/15/2019

Size of location after interim reclamation in acres: 8.00

Estimated post-construction ground elevation: 5109

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: Hicks & Johnson Dacono

Phone: _____

Address: 11355 N. 75th Street

Fax: _____

Address: _____

Email: _____

City: Longmont State: CO Zip: 80503

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 06/01/2015

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:	895 Feet	633 Feet
Building Unit:	797 Feet	551 Feet
High Occupancy Building Unit:	5280 Feet	5280 Feet
Designated Outside Activity Area:	5280 Feet	5280 Feet
Public Road:	509 Feet	128 Feet
Above Ground Utility:	488 Feet	105 Feet
Railroad:	5280 Feet	5280 Feet
Property Line:	523 Feet	141 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

- 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.

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: 02/05/2018

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.

This location was decided upon between Crestone and the surface owner to be compatible with future development of this parcel.

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, 3 to 5% slopes

NRCS Map Unit Name: Weld Loam, 1 to 3% slopes

NRCS Map Unit Name: Wiley - Colby Complex, 3 to 5% 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: _____ 0 Feet

water well: _____ 2597 Feet

Estimated depth to ground water at Oil and Gas Location _____ 160 Feet

Basis for depth to groundwater and sensitive area determination:

Depth to groundwater determination was made based off of data made available from COGCC mapping and data obtained from State of Colorado DWR. Sensitive area determination made because surface water feature is within 1000' of location.

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

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 _____

Operator Proposed Wildlife BMPs

No	Target Species	BMP Type	Description
1	MOUNTAIN PLOVER	Wildlife - Avoidance	The operator agrees to survey CPW-identified suitable nesting habitat within the known range of mountain plover using the USFWS survey protocol (applies March 1 to July 31 on eastern plains, and April 1 to July 31 in South Park. If earthwork not started until after April 15th.

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 is well Hingley 3A-18H-N167.

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

Signed: _____ Date: 03/20/2018 Email: megan.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: _____

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

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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	Material Handling and Spill Prevention	All loadlines will be capped for every location in the DJ.
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	Flowlines Leaks - 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.
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	Material Handling and Spill Prevention	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. 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).
11	Construction	The pad will be constructed in such a manner that noise mitigation may be installed and removed without disturbing the site or landscaping.

12	Construction	Subject pad will have all weather access roads to allow for operator and emergency response. 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.
13	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.
14	Construction	Crestone will install fencing to restrict access to wellheads and equipment. (Fencing style will be installed as required by the town.)
15	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.
16	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.
17	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.
18	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.
19	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.
20	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.
21	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.
22	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.
23	Drilling/Completion Operations	Crestone will utilize a closed-loop system for drilling operations at this location. Crestone will not utilize pits.
24	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: 24 comment(s)

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
401513954	FORM 2A SUBMITTED
401567518	FACILITY LAYOUT DRAWING
401567535	ACCESS ROAD MAP
401567538	WASTE MANAGEMENT PLAN
401567540	MULTI-WELL PLAN
401567860	NRCS MAP UNIT DESC
401567862	NRCS MAP UNIT DESC
401567864	NRCS MAP UNIT DESC
401570588	LOCATION PICTURES
401571203	SURFACE AGRMT/SURETY
401596625	LOCATION DRAWING
401596626	OTHER
401609824	HYDROLOGY MAP
401609826	RULE 305A CERTIFICATION OF COMPLIANCE

Total Attach: 14 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
		Stamp Upon Approval

Total: 0 comment(s)

Public Comments

No public comments were received on this application during the comment period.

