

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:

401244002

Date Received:

04/20/2017

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:

450929

Expiration Date:

06/01/2020

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: Chris McRickard
 Phone: (720) 410-8487
 Fax: ()
 email: chris.mcrickard@crestonepr.com

RECLAMATION FINANCIAL ASSURANCE

- Plugging and Abandonment Bond Surety ID: _____
- Gas Facility Surety ID: _____
- Waste Management Surety ID: 20160109

LOCATION IDENTIFICATION

Name: Pratt Number: 29H-P168-TCA
 County: WELD
 Quarter: NESW Section: 29 Township: 1N Range: 68W Meridian: 6 Ground Elevation: 5158

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: 2075 feet FSL from North or South section line
2414 feet FWL from East or West section line

Latitude: 40.020450 Longitude: -105.028317

PDOP Reading: 1.9 Date of Measurement: 03/10/2017

Instrument Operator's Name: Jason Dahlman

SURFACE & MINERALS & RIGHT TO CONSTRUCT

Name: WWD, LLC

Phone: _____

Address: PO Box 1937

Fax: _____

Address: _____

Email: _____

City: Longmont State: CO Zip: 80502

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: No

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 05/21/2013

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:	_____ Feet	_____ Feet
Building Unit:	_____ Feet	_____ Feet
High Occupancy Building Unit:	_____ Feet	_____ Feet
Designated Outside Activity Area:	_____ Feet	_____ Feet
Public Road:	_____ Feet	_____ Feet
Above Ground Utility:	_____ Feet	_____ Feet
Railroad:	_____ Feet	_____ Feet
Property Line:	_____ Feet	_____ 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: 67- Ulm clay Loam, 3 to 5 percent slopes

NRCS Map Unit Name: 36 - Midway-Shingle complex, 5 to 20 percent 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, Chokeycherry)
- 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: 615 Feet

water well: 0 Feet

Estimated depth to ground water at Oil and Gas Location 7 Feet

Basis for depth to groundwater and sensitive area determination:

1) Permit #294253 (monitor well) used to determine depth to ground water at 74 feet. 2) Permit #52362-MH (monitor well) - no depth to ground water listed. 3) Permit #17239-MH (monitor well) - no depth to ground water listed. 4) Permit #165423 has perf'd casing at 10 and is upgradient of the location. 5) Permit #294252 has perf'd casing top of 7' and perf'd bottom of 75' (basis for estimate depth to ground water).
 2) Nearest water well is 328' as surveyed on attached location drawing.

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

- 1) This pad was constructed by the previous operator between 11/2014-12/2014.
- 2) This pad will be used for fresh water storage. Surface pipes will supply water from third party supplier.
- 3) This pad will be used to stage completions equipment.
- 4) This pad may use a combination of 500 bbl tanks and 2 MLVT's for fresh water storage. Up to 60 (qty) 500 bbl tanks may be on location for fresh water storage, produced water and flowback. Produced water tanks will utilize vapor control. No produced water will be stored in the MLVT.
- 5) MLVT drawings are attached.
- 6) Once completions operations are done, this area will be completely reclaimed.
- 7) Proposed reclamation drawing was agreed upon by CDPHE, COGCC & landowner and is attached.
- 8) Cultural Distances are measured from the edge of the temporary completions pad and are listed on the attached location drawing: Building - 2,213' NW; Building Unit-2,213' NW; Property Line-339' W, Public Road-2,338' SW; Above Ground Utility-3,132' NE; High Occupancy Building Unit-5,280'; Railroad-5,280'; DOAA-5,280'.

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

Signed: _____ Date: 04/20/2017 Email: chris.mcrickard@crestonepr.com

Print Name: Chris McRickard 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: 6/2/2017

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 shall remain on the location until operations are complete and reclamation begins.
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Best Management Practices

No	BMP/COA Type	Description
1	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.
2	Storm Water/Erosion Control	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.
3	Construction	Subject pad will have all weather access roads to allow for operator and emergency response.
4	Construction	All leasehold roads will be constructed to accommodate local emergency vehicle access requirements, and will be maintained in a reasonable condition.
5	Noise mitigation	<p>Crestone has performed baseline noise surveys at the Pratt 29H-P168 (facility ID: 434526) and the Waste Connections 29H-M168 (facility ID: 434375) locations to determine existing ambient noise conditions. These surveys will also serve as the baseline ambient noise survey for the proposed Pratt 29H-P168 TCA given their close proximity.</p> <p>To address noise concerns during operations, Crestone will utilize continuous noise monitoring to assure compliance of COGCC Rule 802. Should Crestone receive any noise complaints during operational activities, sound levels will be measured at a distance of three hundred and fifty 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 prior to completions activities.</p>
6	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 or choke back the well versus freely venting.
7	Drilling/Completion Operations	This temporary completions area of approximately 6.5 acres will be utilized for fresh water storage, produced water storage and completions equipment. We may use up to 60 temporary 500 bbl enclosed tanks and up to 2 MLVTs at this location. MLVTs will be utilized for fresh water storage only. Produced water tanks will have vapor control. 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 from September 2017 through December 2017 or until completions operations are done. Once completions operations are done, this area will be reclaimed per Final Reclamation BMP. 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."

8	Final Reclamation	<p>The final reclamation plan has been coordinated with staff at CDPHE, COGCC and the surface owner. The proposed plan for reclamation of the temporary completions area is as follows:</p> <p>Reclamation of the site will use onsite, existing fill dirt to spread outward from the pad. No heavy equipment is approved to encroach upon undisturbed land. Toward the northern portion of the TCA, approximately 1-2 feet of existing fill dirt will be left in Area 1 of the attachment diagram. In Area 2 of the attached diagram, approximately 1 foot of existing fill dirt will be spread evenly. Outlying contours will be filled with existing fill dirt; any excess fill dirt will be hauled off. Top soil will then be spread over the newly created area and seeded. Dirt estimates would be approximately 6-12 inches of certified top soil placed directly over the fill dirt for direct seed germination. Reclamation standards will be followed according to the COGCC 1000 Series Reclamation Rules. If trash is encountered on any level, Crestone Peak will contact CDPHE immediately.</p>
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Total: 8 comment(s)

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
401244002	FORM 2A SUBMITTED
401245150	ACCESS ROAD MAP
401245159	LOCATION DRAWING
401245160	LOCATION PICTURES
401245161	SURFACE AGRMT/SURETY
401245166	NRCS MAP UNIT DESC
401264182	OTHER
401264183	OTHER
401264184	OTHER
401264185	OTHER
401264200	OTHER
401266352	NRCS MAP UNIT DESC
401268431	HYDROLOGY MAP
401268450	OTHER
401268452	OTHER
401270649	SURFACE AGRMT/SURETY

Total Attach: 16 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final review complete.	06/01/2017
OGLA	Location is not within a designated setback area. One public comment was made regarding nuisance mitigation. The Operator does have a noise BMP on this 2A. This location will support completions operations for Locations 434526 and 434375. OGLA review complete and task passed.	05/30/2017
OGLA	Spoke with Operator on the phone regarding concerns for the noise BMP for the timing and distance of the baseline noise survey. Operator agreed and sent a new BMP for noise which OGCC replaced with the original noise BMP.	05/30/2017
OGLA	Contacted Operator regarding more specifics for the noise mitigation BMP. Operator emailed additional information and OGCC updated the Noise BMP.	05/24/2017
OGLA	Location was constructed by previous Operator and is not in a designated setback area. COGCC has determined this is an oil and gas location based on the Operator having the surface use agreement for a centralized completions area to support two other nearby oil and gas locations.	05/22/2017
LGD	Proposed location is not an oil gas location. In Town of Erie - not Weld County.	05/17/2017
OGLA	Operator responded that the distance to the water well is 0 feet from the edge of disturbance and 328 feet from the reference point. The cultural distances are measured from the reference point as exact placement of the MLVTs and the completions equipment is unknown. This location is not in a designated setback area (all building units are over 1,000 feet away) so the reference point was used for measurements. The distance from the edge to the property line is closer to 85 feet vs. the 339 feet from the reference point.	05/16/2017
OGLA	OGLA review: check with Operator on distance to the nearest water well and property line.	05/11/2017
Permit	Passes completeness.	05/01/2017
Permit	Returned to draft: - SUA description in metes and bounds requires a SUA map to be submitted	04/28/2017
OGLA	OGLA reviewed for completeness - OK to go into process.	04/28/2017
OGLA	Returned to draft: OGLA completeness review - missing MLVT size, timeframe, and vendor. Wrong NRCS map unit is attached. Ask for cultural distances as a comment or separate attachment. Request to be pushed back to Draft.	04/24/2017

Total: 12 comment(s)