

State of Colorado
Oil and Gas Conservation Commission

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CUMULATIVE IMPACTS DATA IDENTIFICATION

Per Rule 303, this form and all required components and attachments will be submitted for any Oil and Gas Development Plan.

Form Type: ☒ OGD ☐ Partial 2B - Rule 803.b.(2).A UIC Conversion

OPERATOR INFORMATION

OGCC Operator Number: 10633

Name of Operator: CRESTONE PEAK RESOURCES OPERATING LLC

Address: 1801 CALIFORNIA STREET #2500

City: DENVER State: CO Zip: 80202

Contact Name and Telephone:

Name: Kathy Denzer

Phone: (303) 312-8131

Email: kdenzer@civiresources.com

OIL & GAS DEVELOPMENT PLAN INFORMATION

Oil & Gas Development Plan Name: Prosper Farms 4-65 2-1-6

Oil & Gas Development Plan Docket #:

Oil & Gas Development Plan ID #:

Docket Number

Data not required

220500093

☐ This OGD is included in a Comprehensive Area Plan. CAP ID #: _____

OIL & GAS LOCATION DATA

1 Oil & Gas Location Name: Prosper Farms

Number: 4-65 2-1-6

Status: Active, built

OIL & GAS LOCATION INFORMATION

Form 2A Doc#: 403001067

Loc ID#: 443722

Oil & Gas Location: QTRQTR: NWSW Sec: 2 Twp: 4S Rng: 65W Meridian: 6

Total number of wells planned: 13

Operations Duration

Estimated total number of weeks to construct this Oil & Gas Location: 5

Estimated total number of weeks to drill all planned wells for this Oil & Gas Location: 83

Number of planned drilling occupations to drill all planned wells for this Oil & Gas Location: 1

Estimated total number of weeks to complete all planned wells for this Oil & Gas Location: 14

Number of planned completions occupations to complete all planned wells for this Oil & Gas Location: 1

Will there be simultaneous drilling and completions operations occurring at this Oil & Gas Location? No

Estimated total number of months the Oil & Gas Location will be active, prior to abandonment and reclamation: 240

Noise Impacts

Provide a qualitative evaluation of the incremental adverse noise impacts to the surrounding receptors during the pre-production activities at this Oil & Gas Location.

Noise impacts during pre-production activities will be during the construction, drilling and completions phases. There is one RBU 3,857 feet from edge of working pad surface. Receptors of noise impacts could be agriculture operations and existing oil and gas operations.

Provide a qualitative evaluation of the incremental adverse noise impacts to the surrounding receptors during the production stage of this Oil & Gas Location.

Noise during production will not increase ambient noise. Noise from traffic and equipment will be minimal.

Light Impacts

Provide a qualitative evaluation of the incremental adverse light impacts to the surrounding receptors during the pre-production activities at this Oil & Gas Location.

During pre-production phases, additional lighting from the construction, drilling and completions phases will be continuous due to safety requirements.

Provide a qualitative evaluation of the incremental adverse light impacts to the surrounding receptors during the production stage of this Oil & Gas Location.

No night work and no permanent lighting will be installed on the site during production activities.

Odor Impacts

Provide a qualitative evaluation of the incremental adverse odor impacts to the surrounding receptors during the pre-production activities at this Oil & Gas Location.

Drilling rig and completion engine exhausts are pointed straight up so as not to be directed towards any occupied buildings. During the fracturing process, diesel-fueled fracturing equipment will be pointed away from the Building Unit. To mitigate the effects of odor from Crestone's operations, Crestone will employ only International Association of Oil & Gas Producers (IOGP) Group III drilling base fluids with <0.5 weight % aromatics and will not use drilling fluids based on diesel. We also employ the use of mud chillers. Sealed tanks with pressure relief valves and emissions controls will be utilized for the production facilities.

Provide a qualitative evaluation of the incremental adverse odor impacts to the surrounding receptors during the production stage of this Oil & Gas Location.

Odor impacts will be minimal to any receptors during the production stage. Odors will come from traffic to and from the location to remove resources and inspect the location.

WATER RESOURCES

☒ This Oil & Gas Location is listed as a sensitive area for water resources.

☒ This Oil & Gas Location is within 2,640 feet of a surface Water of the State.

Estimated depth to groundwater: 150

Estimated total planned on-location storage capacity of the Oil & Gas Location for:

	Number of Tanks	Total Volume (bbls)
Oil	6	4500
Condensate	0	0
Produced Water	2	1000
Other volumes of stored fluids, hydrocarbons, chemicals, or E&P Waste Fluids	4	48

List, with volumes, the "Other" fluids planned to be stored on the Oil & Gas Location, including, but not limited to: hydrocarbons, chemicals, or E&P Waste fluids.

Corrosion Inhibitor, Paraffin inhibitor, H2S Scavenger, Methanol

Potential Impacted Surface Water Resources

Provide the distance and direction of the contaminant migration pathway from the Oil & Gas Location to the nearest downstream riparian corridors, wetlands, and surface Waters of the State. Also provide an evaluation of the baseline condition of the nearest downstream riparian corridors, wetlands, and surface Waters of the State.

Enter 2,640 for distances greater than 1/2-mile. Distances are measured along the migration pathway, not a straight line from the edge of the Oil & Gas Location.

	Distance	Direction	Evaluation of Baseline Condition
Riparian Corridor	2640	SW	Not Applicable
Wetland	0	SE	The surface waters of the State is identified as a Riverine habitat and is classified as a R4SBC.
Surface Waters of the State	0	SE	The surface waters of the State is identified as a Riverine habitat and is classified as a R4SBC.

Potential Impacts to Public Water Resources

Provide the distance, direction, and evaluation of potential impacts to the nearest Public Water System Intake. Enter 5,280 for distances greater than 1-mile.

Distance Direction Evaluation of Baseline Condition

Public Water System Intake 5280 SW Not Applicable

Estimated Water Usage

Provide the estimated total volumes of the following that are anticipated to be used during the drilling and completions stage of the Oil & Gas Location activity.

Water Source	Volume (bbls)		Volume (bbls)		Volume (bbls)		
Surface Water	6300000	Recycled Water (Produced Water)	0	Unspecified Source	0	Percentage	0 %
Ground Water	0	Recycled Water (non-Produced Water)	0	Total Water Usage	6300000	Recycled Water	0

If an unspecified water source is planned to be used, provide a description of the source.

Not Applicable

Evaluate the measures being taken to reduce freshwater use, including reusing and recycling produced water.

Our primary measure to reduce the usage of fresh water is to utilize Reg 84 - Reclaimed Water for frac operations, pending availability. In addition, should we have on-going operations we will re-evaluate the ability to use water from producing wells in the area. Currently this area produces less than 500 BBL/well so water from our existing wells which would displace only 30,000 bbls of fresh water.

ECOSYSTEM & WILDLIFE RESOURCES

List High Priority Habitats (HPH) that occur within one mile of the Oil & Gas Location and list the distance from working pad surface. If the location is partially or entirely within a HPH list the distance as '0' and provide the estimated acreage disturbance of that HPH by the location construction.

High Priority Habitat (HPH) Name:	Distance	Estimated Acreage Disturbed
Aquatic Native Species Conservation Waters	5280	0

List total size of disturbed acreage and disturbed High Priority Habitat (HPH) area (in acres) during the Oil & Gas Location construction and after interim reclamation.

Total Acreage (acres) Total HPH Acreage (acres) Provide any further information regarding the location's HPH disturbance.

	Total Acreage (acres)	Total HPH Acreage (acres)	N/A
Construction	24.57	0	
Post-interim Reclamation	16.68	0	

Provide the acreage of the existing land use types that occur within one mile of the Oil & Gas Location. Note: a circle with a one mile radius is approximately 2010 acres.

		Existing Acreage			Existing Acreage			Existing Acreage	Existing Acreage
Crop Land:	Irrigated	<u>0</u>	Non-Irrigated	<u> </u>	Conservation Reserve Program(CRP)	<u>0</u>			
Non-Crop Land:	Rangeland	<u>0</u>	Forestry	<u>0</u>	Recreation	<u>0</u>	Other	<u>0</u>	
Subdivided:	Industrial	0	Commercial	0	Residential	0			

If any land use is industrial, provide a description of the use or operation of the industrial facilities.

N/A

If any land use is "Other", provide a description of the land use.

N/A

If any portion of the land use for the proposed oil and gas location includes Rangeland, Forestry, or Recreation, provide a list of the plant community or communities and estimated acreage disturbed for each:

	Estimated Disturbed Acreage		Estimated Disturbed Acreage		Estimated Disturbed Acreage		Estimated Disturbed Acreage
Disturbed Grassland	0	Shrub Land	0	Mountain Riparian	0	Wetland Aquatic	0

Provide a qualitative evaluation of incremental adverse impacts to ecosystems, including any plant communities, as a result of Oil and Gas Operations associated with the proposed Oil & Gas Location.

Potential adverse impacts to the ecosystem are anticipated to be minimal. (See Wildlife Protection Plan attached to Form 2A which includes a qualitative evaluation of potential adverse impacts to ecosystems, including vegetative communities, surface waters, and wildlife).

Soil Resources

List all soil map units that occur within the Oil & Gas Location and list the estimated total area (in acres) disturbance of each soil map unit.

NRCS Map Unit Name:	Estimated Disturbed Acreage
AdC - Adena-Colby Silt Loams, 1 to 5 percent slopes	8.6
WeB - Weld Silt Loam, 0 to 3 percent slopes	1.9
WrB - Weld-Deertrail Silt Loams, 0 to 3 percent slopes	8.5

PUBLIC WELFARE

☒ This Oil & Gas Location lies within a Disproportionately Impacted Community as defined in the 100-series rules.

Building Units within 1-mile

0'-2,000' 2,001'-5,280'

Total number of Residential Building Units:	0	0
Total Number of non-school AND non child care center High Occupancy Building Units:	0	0
Total number of School Facilities:	0	0
Total number of Child Care Centers:	0	0

Recreation and Scenic Value

List all State Parks, State Trust Lands, or State Wildlife Area within 1-mile of the Oil & Gas Location.

Not Applicable

List all Designated Outdoor Activity Areas within 1-mile of the Oil & Gas Location.

Not Applicable

List all mapped trails that support any of the following recreational activities within 1-mile of the Oil & Gas Location: Hiking, Biking, Horseback Riding, Motorcycle Riding, ATV Riding, OHV, Nordic Skiing, Snowmobiling, or Snowshoeing.

Not Applicable

AIR RESOURCES

Pre-Production Emissions

Complete the following chart based on the estimated total equipment emissions (in tons) for the Oil & Gas Location during the pre-production (construction, drilling, completions) stage for Criteria Pollutants by equipment type.

	NOx	CO	VOCs	Methane	Ethane	CO2	N2O
Process Heaters or Boilers	1.676	0.419	0.028	0.018	0.018	1868.37	0.022
Storage Tanks	0	0	0	0	0	0	0
Venting or Blowdowns	0	0	3.687	0.008	0.01	396	0
Combustion Control Devices	0.323	1.473	0	0	0	0	0
Non-Road Internal Combustion Engines	187	166.86	16.35	28.161	28.163	7696.77	0.013
Drill Mud	0	0	5.872	3.979	1.797	0.287	0
Flowback or Completions	0.323	1.473	7.374	0.008	0.01	396	0
Loadout	0	0	0	0	0	0	0

Production Emissions

Complete the following chart based on the estimated full facility equipment emissions (in tons) for the Oil & Gas Location once the Oil & Gas Location has entered the production stage, for Criteria Pollutants. The table should be filled out based on ONE year of operation.

	NOx	CO	VOCs	Methane	Ethane	CO2	N2O
Stationary Engines or Turbines	14.996	29.992	10.497	12.089	3.7	5781.615	0.014
Process Heaters or Boilers	4.889	4.107	0.269	0.112	0.152	5867.163	0.014
Storage Tanks	0	0	11.099	551.185	5829.548	426.713	0
Dehydration Units	0	0	0	0	0	0	0
Pneumatic Pumps	0	0	0	0	0	0	0
Pneumatic Controllers	0	0	0	0	0	0	0
Separators	4.889	4.107	0.269	0.112	0.152	5867.163	0.014
Fugitives			0.599	0.378	0.18	0.044	
Venting or Blowdowns	0	0	13.145	5.101	2.2126	0.567	0
Combustion Control Devices	1.069	4.874	0	0	0	0	0.008
Loadout	0	0	1.775	548.785	5827.413	424.454	0
Non-Road Internal Combustion Engines	0	0	0	0	0	0	0
Well Bradenhead	0	0	0.079	0.014	11.49	3.121	0
Well Maintenance	0	0	0.031	0.033	0.014	0.004	0

Diesel Vehicle Road Miles

Complete the following chart for diesel vehicle road miles during each stage of oil and gas location operations.

During Construction: 38000 During Completions: 221428
During Drilling: 125000 During Interim Reclamation: 3000
During Production: 7300

PUBLIC HEALTH RESOURCES

Pre-Production Emissions

Complete the following chart based on the estimated total equipment emissions (in lbs) for the Oil & Gas Location during the pre-production (construction, drilling, completions) stage for Hazardous Air Pollutants (HAP).

	BEN	TOL	ETH	XYL	NHE	TMP	H2S	FDE	MET	HAP
Process Heaters or Boilers	4.879	141.36	1.45	2.485	0	0	0	752.4	0	902.574
Storage Tanks	0	0	0	0	0	0	0	0	0	0
Venting or Blowdowns	21.539	12.571	1.469	3.818	124.713	0.02	0	0	0	164.13
Combustion Control Devices	0	0	0	0	0	0	0	0	0	0
Non-Road Internal Combustion Engines	0	0	0	0	0	0	0	0	0	0
Drill Mud	0	0	0	0	0	0	0	0	0	0
Flowback or Completions	43.079	12.577	1.469	7.637	249.426	0.039	0	0	0	314.228
Loadout	0	0	0	0	0	0	0	0	0	0

Production Emissions

Complete the following chart based on the estimated total equipment emissions (in lbs) for the Oil & Gas Location once the Oil & Gas Location has entered the production stage, for Hazardous Air Pollutants (HAP). The table should be filled out based on ONE year of operation.

	BEN	TOL	ETH	XYL	NHE	TMP	H2S	FDE	MET	HAP
Stationary Engines or Turbines	166.09	58.657	2.607	20.498	0	0	0	7798.005	321.668	8367.526
Process Heaters or Boilers	0	0	0	0	0.088	0	0	0.004	0	0.092

Storage Tanks	110.34 8	78.202	8.309	25.24	701.89 8	2.207	0	0	0	926.20 5
Dehydration Units	0	0	0	0	0	0	0	0	0	0
Pneumatic Pumps	0	0	0	0	0	0	0	0	0	0
Pneumatic Controllers	0	0	0	0	0	0	0	0	0	0
Separators	0	0	0	0	0	0	0	7.334	0	7.334
Fugitives	4.471	6.151	1.595	5.58	25.523	0.116	0	0	0	43.435
Venting or Blowdowns	130.13 2	79.513	7.561	20.92 8	698.68 7	1.607	0	0	0	938.42 8
Combustion Control Devices	0	0	0	0	0	0	0	0	0	0
Non-Road Internal Combustion Engines	0	0	0	0	0	0	0	0	0	0
Loadout	6.178	0	0	0	54.613	0	0	0	0	60.791
Well Bradenhead	0.462	0	0.031	0.082	2.674	0	0	0	0	3.25
Well Maintenance	0.182	0.106	0.012	0.032	1.056	0	0	0	0	1.39

Provide a qualitative evaluation of any potential acute or chronic, short- or long-term incremental impacts to public health as a result of the estimated total pre-production hazardous air pollutant emissions.

In 2019, Crestone hired a third-party expert from CTEH, LLC, to design and perform studies to characterize the short-term impacts on local air quality and public health from discrete operational phases at four oil and natural gas well pads being developed in Weld County, Colorado. It is important to note that Crestone is using similar technologies and practices for the Prosper Farms Well Site as was used in the four locations in the studies. The specific goals of this project were to: (1) collect a high-resolution data set of chemical concentrations in air near the well pad and the surrounding communities; and (2) evaluate the impact on risks to public health, if any, from the release of oil and gas-related compounds into the air during specific operational phases of well development. CTEH conducted real-time air monitoring for total VOCs, hydrogen sulfide ("H₂S"), particulate matter ("PM"), and specific VOCs (such as benzene), simultaneously with other measurements. As the report states in its Executive Summary: More than 5,000 total measurements were collected in real-time by CTEH personnel in the communities surrounding the wellpads over a period of 26 days. Additionally, 20 analytical samples were collected from four locations around the Big Horn wellpad to evaluate potential community exposures over 5 days of flowback activities. Approximately 99% of the real-time VOC measurements recorded in the communities were non-detections, which means that VOCs were not present or that VOC concentrations were less than the instrument detection limit of 1 ppb [part per billion] for VOCs. This detection limit is well below the federal (ATSDR [Agency for Toxic Substances and Disease Registry]) health guideline level for short-term adverse health effects for benzene (9 ppb). Of the over 1,500 measurements collected for benzene specifically or VOCs in general, just one reading was at a detectable level but did not exceed public health guideline values for the BTEX compounds. No H₂S was ever detected [at a detection limit of 0.1 part per million], and just one of over 1,500 readings taken for PM, taken on along a dirt road, was higher than typical background values. In the 20 analytical air samples collected in the surrounding community during flowback, the maximum measured concentrations for BTEX compounds were also all 10 to 13,000-times lower than their respective federal acute health guideline values.

... the real-time and analytical data indicate no adverse health risks to nearby communities, including sensitive individuals, from cumulative exposures to VOCs that may be emitted from pre-production and production activities at Crestone well pads.

Since Crestone is planning to use similar practices and technologies for the Prosper Farms Well Site as was used in the four locations in Weld County, we expect similar outcomes at Prosper Farms.

Provide a qualitative evaluation of any potential acute or chronic, short- or long-term incremental impacts to public health as a result of the estimated annual production hazardous air pollutant emissions.

In 2019, Crestone hired a third-party expert from CTEH, LLC, to design and perform studies to characterize the short-term impacts on local air quality and public health from discrete operational phases at four oil and natural gas well pads being developed in Weld County, Colorado. It is important to note that Crestone is using similar technologies and practices for the Prosper Farms Well Site as was used in the four locations in the studies. The specific goals of this project were to: (1) collect a high-resolution data set of chemical concentrations in air near the well pad and the surrounding communities; and (2) evaluate the impact on risks to public health, if any, from the release of oil and gas-related compounds into the air during specific operational phases of well development. CTEH conducted real-time air monitoring for total VOCs, hydrogen sulfide ("H2S"), particulate matter ("PM"), and specific VOCs (such as benzene), simultaneously with other measurements. As the report states in its Executive Summary: More than 5,000 total measurements were collected in real-time by CTEH personnel in the communities surrounding the wellpads over a period of 26 days. Additionally, 20 analytical samples were collected from four locations around the Prosper Farms wellpad to evaluate potential community exposures over 5 days of flowback activities. Approximately 99% of the real-time VOC measurements recorded in the communities were non-detections, which means that VOCs were not present or that VOC concentrations were less than the instrument detection limit of 1 ppb [part per billion] for VOCs. This detection limit is well below the federal (ATSDR [Agency for Toxic Substances and Disease Registry]) health guideline level for short-term adverse health effects for benzene (9 ppb). Of the over 1,500 measurements collected for benzene specifically or VOCs in general, just one reading was at a detectable level but did not exceed public health guideline values for the BTEX compounds. No H2S was ever detected [at a detection limit of 0.1 part per million], and just one of over 1,500 readings taken for PM, taken on along a dirt road, was higher than typical background values. In the 20 analytical air samples collected in the surrounding community during flowback, the maximum measured concentrations for BTEX compounds were also all 10 to 13,000-times lower than their respective federal acute health guideline values.

... the real-time and analytical data indicate no adverse health risks to nearby communities, including sensitive individuals, from cumulative exposures to VOCs that may be emitted from pre-production and production activities at Crestone well pads.

Since Crestone is planning to use similar practices and technologies for the Prosper Farms Well Site as was used in the four locations in Weld County, we expect similar outcomes at Prosper Farms.

Dust Impacts

The following are the estimated number of truck trips traveling on or off the Oil & Gas Location.

Total	During Construction	During Drilling	During Completions	During Interim Reclamation	During Production
Monthly	<u>506</u>	<u>2000</u>	<u>2345</u>	<u>100</u>	<u>4469</u>
Annual	<u>540</u>	<u>6000</u>	<u>7358</u>	<u>215</u>	<u>18600</u>

Estimated total pounds (lbs) of proppant to be used during completions activities. 2520000
00

Provide the type of proppant(s) that are planned to be used during completions activities.

Main sand used is 40/70 mesh white or equivalent sand. Smaller volumes of 100 mesh and 200 mesh sand may also be used.

Provide an evaluation of the proposed proppant management system that will be used to minimize dust during completions activities, including the estimated amount of silica dust that will leave the Oil & Gas Location.

The proppant management system is the box style system with gravity deployment. The system has proven to deliver sand with very little to no visible dust. The actual measurement of dust is visual at this time.

OSHA exposure limits of silica dust have been measured and provided to insure worker exposure is controlled in this area per OSHA requirements.

This system has controlled or eliminated the possibility of dust leaving the site.

EXISTING OIL & GAS

Total number of oil & gas locations within 1-mile of the Oil & Gas Location:

	Total Number of Locations		Total Number of Wells
Active, built	<u>6</u>	Active, built	<u>13</u>
Permitted by COGCC, unbuilt	<u>0</u>	Permitted by COGCC, unbuilt	<u>0</u>
Permitted by Relevant Local Government & not COGCC, unbuilt	<u>0</u>	Proposed	<u>11</u>
Proposed	<u>1</u>	Plugged and Abandoned	<u>1</u>

Total acreage disturbance during construction of the active and proposed oil & gas locations within 1-mile of the proposed Oil & Gas Location: 65

Source for acreage total:

- ☐ Field Observation/Measurement
- ☒ COGCC Location Files
- ☐ Aerial PhotosOther

☐ Other

If "Other" is selected, please describe the source use to determine the acreage total for construction disturbance of the active and proposed oil & gas locations within 1-mile of the proposed Oil & Gas Location.

Total permitted capacity of on-location storage (in number of pits and tanks) of the active and proposed oil & gas locations within 1-mile of the Oil & Gas Location :
NOTE: providing the existing number of pits and tanks on surrounding existing locations is optional.

Source for storage totals:

- ☐ Field Observation/Measurement
☒ COGCC Location Files
☐ Aerial PhotosOther
☐ Other

	Permitted Onsite Storage Capacity	Existing Onsite Storage Capacity
Oil	35	29
Condensate	1	1
Produced Water	13	11
Pits	0	0

If "Other" is selected, please describe the source use to determine the tank totals for the active and proposed oil & gas locations within 1-mile of the proposed Oil & Gas Location.

2 Oil & Gas Location Name: Property Reserve

Number: 4-65 3-4

Status: Active, built

OIL & GAS LOCATION INFORMATION

Form 2A Doc#: 401415017

Loc ID#: 456535

Oil & Gas Location: QTRQTR: SENE Sec: 3 Twp: 4S Rng: 65W Meridian: 6

Total number of wells planned: 0

Operations Duration

Estimated total number of weeks to construct this Oil & Gas Location: 0

Estimated total number of weeks to drill all planned wells for this Oil & Gas Location: 0

Number of planned drilling occupations to drill all planned wells for this Oil & Gas Location: 0

Estimated total number of weeks to complete all planned wells for this Oil & Gas Location: 0

Number of planned completions occupations to complete all planned wells for this Oil & Gas Location: 0

Will there be simultaneous drilling and completions operations occurring at this Oil & Gas Location? No

Estimated total number of months the Oil & Gas Location will be active, prior to abandonment and reclamation: 240

Noise Impacts

Provide a qualitative evaluation of the incremental adverse noise impacts to the surrounding receptors during the pre-production activities at this Oil & Gas Location.

None. This is an existing location. There will not be any future drilling activities on this pad. Production Only.

Provide a qualitative evaluation of the incremental adverse noise impacts to the surrounding receptors during the production stage of this Oil & Gas Location.

Noise during the production phase will be limited to well maintenance and inspections. There will be minimal impacts from noise

Light Impacts

Provide a qualitative evaluation of the incremental adverse light impacts to the surrounding receptors during the pre-production activities at this Oil & Gas Location.

None. This is an existing location. There will not be any future drilling activities on this pad. Production Only.

Provide a qualitative evaluation of the incremental adverse light impacts to the surrounding receptors during the production stage of this Oil & Gas Location.

There are no permanent lights installed on the existing location. The only lights that will be on location are from trucks hauling water.

Odor Impacts

Provide a qualitative evaluation of the incremental adverse odor impacts to the surrounding receptors during the pre-production activities at this Oil & Gas Location.

None. This is an existing location. There will not be any future drilling activities on this pad. Production Only.

Provide a qualitative evaluation of the incremental adverse odor impacts to the surrounding receptors during the production stage of this Oil & Gas Location.

The odor during the production stage is minimal as indicated by the Emissions data. There is also minimal traffic during production

WATER RESOURCES

☒ This Oil & Gas Location is listed as a sensitive area for water resources.

☐ This Oil & Gas Location is within 2,640 feet of a surface Water of the State.

Estimated depth to groundwater: 18

Estimated total planned on-location storage capacity of the Oil & Gas Location for:

	Number of Tanks	Total Volume (bbls)
Oil	12	6000
Condensate	0	0
Produced Water	4	2000
Other volumes of stored fluids, hydrocarbons, chemicals, or E&P Waste Fluids	0	0

List, with volumes, the "Other" fluids planned to be stored on the Oil & Gas Location, including, but not limited to: hydrocarbons, chemicals, or E&P Waste fluids.

N/A

Potential Impacted Surface Water Resources

Provide the distance and direction of the contaminant migration pathway from the Oil & Gas Location to the nearest downstream riparian corridors, wetlands, and surface Waters of the State. Also provide an evaluation of the baseline condition of the nearest downstream riparian corridors, wetlands, and surface Waters of the State.

Enter 2,640 for distances greater than 1/2-mile. Distances are measured along the migration pathway, not a straight line from the edge of the Oil & Gas Location.

	Distance	Direction	Evaluation of Baseline Condition
Riparian Corridor	2640	E	Not Applicable
Wetland	1448	E	The Wetland is a Riverine habitat that is classified as a R4SBC.
Surface Waters of the State	1448	E	The Surface Waters of the State is classified as a Riverine habitat and classified as a R4SBC.

Potential Impacts to Public Water Resources

Provide the distance, direction, and evaluation of potential impacts to the nearest Public Water System Intake. Enter 5,280 for distances greater than 1-mile.

	Distance	Direction	Evaluation of Baseline Condition
Public Water System Intake	5280	SW	This is an existing location. There are no future drilling activities planned. Production Only.

Estimated Water Usage

Provide the estimated total volumes of the following that are anticipated to be used during the drilling and completions stage of the Oil & Gas Location activity.

Water Source	Volume (bbls)	Volume (bbls)	Volume (bbls)
Surface Water	0	Recycled Water (Produced Water)	0
		Unspecified Source	0

0 %

Ground Water 0 Recycled Water (non-Produced Water) 0 Total Water Usage 0 Percentage Recycled Water

If an unspecified water source is planned to be used, provide a description of the source.

This is an existing location. There are no future drilling activities planned. Production Only.

Evaluate the measures being taken to reduce freshwater use, including reusing and recycling produced water.

This is an existing location. There are no future drilling activities planned. Production Only.

ECOSYSTEM & WILDLIFE RESOURCES

List High Priority Habitats (HPH) that occur within one mile of the Oil & Gas Location and list the distance from working pad surface. If the location is partially or entirely within a HPH list the distance as '0' and provide the estimated acreage disturbance of that HPH by the location construction.

Data not required

List total size of disturbed acreage and disturbed High Priority Habitat (HPH) area (in acres) during the Oil & Gas Location construction and after interim reclamation.

	Total Acreage (acres)	Total HPH Acreage (acres)	Provide any further information regarding the location's HPH disturbance.
Construction	<u>0</u>	<u>0</u>	This is an existing location. There are no future drilling activities planned. Production Only.
Post-interim Reclamation	<u>4.78</u>	<u>0</u>	

Provide the acreage of the existing land use types that occur within one mile of the Oil & Gas Location. Note: a circle with a one mile radius is approximately 2010 acres.

		Existing Acreage			Existing Acreage			Existing Acreage	Existing Acreage
Crop Land:	Irrigated	<u>0</u>	Non-Irrigated	<u>0</u>	Conservation Reserve Program(CRP)	<u>0</u>			
Non-Crop Land:	Rangeland	<u>0</u>	Forestry	<u>0</u>	Recreation	<u>0</u>	Other	<u>0</u>	
Subdivided:	Industrial	<u>0</u>	Commercial	<u>0</u>	Residential	<u>0</u>			

If any land use is industrial, provide a description of the use or operation of the industrial facilities.

N/A

If any land use is "Other", provide a description of the land use.

N/A

If any portion of the land use for the proposed oil and gas location includes Rangeland, Forestry, or Recreation, provide a list of the plant community or communities and estimated acreage disturbed for each:

	Estimated Disturbed Acreage		Estimated Disturbed Acreage		Estimated Disturbed Acreage		Estimated Disturbed Acreage
Disturbed Grassland	<u>0</u>	Shrub Land	<u>0</u>	Mountain Riparian	<u>0</u>	Wetland Aquatic	<u>0</u>
Native Grassland	0	Plains Riparian	0	Forest Land	0	Alpine	0

Provide a qualitative evaluation of incremental adverse impacts to ecosystems, including any plant communities, as a result of Oil and Gas Operations associated with the proposed Oil & Gas Location.

As this location is already constructed, there would be minimal adverse impacts to the ecosystems.

Soil Resources

List all soil map units that occur within the Oil & Gas Location and list the estimated total area (in acres) disturbance of each soil map unit.

NRCS Map Unit Name:	Estimated Disturbed Acreage
Weld-Deertrail Silt Loams, 0 to 3 Percent Slopes	<u>0</u>
Adena-Colby Silt Loams, 1 to 5 Percent Slopes	<u>0</u>

PUBLIC WELFARE

☐ This Oil & Gas Location lies within a Disproportionately Impacted Community as defined in the 100-series rules.

Building Units within 1-mile

0'-2,000' 2,001'-5,280'

Total number of Residential Building Units:	0	0
Total Number of non-school AND non child care center High Occupancy Building Units:	0	0
Total number of School Facilities:	0	0
Total number of Child Care Centers:	0	0

Recreation and Scenic Value

List all State Parks, State Trust Lands, or State Wildlife Area within 1-mile of the Oil & Gas Location.

N/A

List all Designated Outdoor Activity Areas within 1-mile of the Oil & Gas Location.

N/A

List all mapped trails that support any of the following recreational activities within 1-mile of the Oil & Gas Location: Hiking, Biking, Horseback Riding, Motorcycle Riding, ATV Riding, OHV, Nordic Skiing, Snowmobiling, or Snowshoeing.

N/A

AIR RESOURCES**Pre-Production Emissions**

Complete the following chart based on the estimated total equipment emissions (in tons) for the Oil & Gas Location during the pre-production (construction, drilling, completions) stage for Criteria Pollutants by equipment type.

	NOx	CO	VOCs	Methane	Ethane	CO2	N2O
Process Heaters or Boilers	0	0	0	0	0	0	0
Storage Tanks	0	0	0	0	0	0	0
Venting or Blowdowns	0	0	0	0	0	0	0
Combustion Control Devices	0	0	0	0	0	0	0
Non-Road Internal Combustion Engines	0	0	0	0	0	0	0
Drill Mud	0	0	0	0	0	0	0
Flowback or Completions	0	0	0	0	0	0	0
Loadout	0	0	0	0	0	0	0

Production Emissions

Complete the following chart based on the estimated full facility equipment emissions (in tons) for the Oil & Gas Location once the Oil & Gas Location has entered the production stage, for Criteria Pollutants. The table should be filled out based on ONE year of operation.

	NOx	CO	VOCs	Methane	Ethane	CO2	N2O
Stationary Engines or Turbines	2.35	4.69	1.64	1.89	0.58	904.66	0
Process Heaters or Boilers	1.22	1.03	0.07	0.03	0.04	1466.79	0
Storage Tanks	0	0	2.78	137.84	1457.42	106.72	0
Dehydration Units	0	0	0	0	0	0	0
Pneumatic Pumps	0	0	0	0	0	0	0
Pneumatic Controllers	0	0	0	0	0	0	0
Separators	1.22	1.03	0.07	0.03	0.04	1466.79	0
Fugitives			0.17	0.1	0.05	0.01	
Venting or Blowdowns	0	0	2.73	1.46	0.61	0.16	0
Combustion Control Devices	0.94	4.29	0	0	0	0	0.01
Loadout	0	0	0.44	137.2	1456.85	106.11	0
Non-Road Internal Combustion Engines	0	0	0	0	0	0	0
Well Bradenhead	0	0	0.08	0.01	11.49	3.12	0
Well Maintenance	0	0	0.01	0.01	0	0	0

Diesel Vehicle Road Miles

Complete the following chart for diesel vehicle road miles during each stage of oil and gas location operations.

During Construction: 0

During Completions: 0

During Drilling: 0

During Interim Reclamation: 0

During Production: 52000

PUBLIC HEALTH RESOURCES**Pre-Production Emissions**

Complete the following chart based on the estimated total equipment emissions (in lbs) for the Oil & Gas Location during the pre-production (construction, drilling, completions) stage for Hazardous Air Pollutants (HAP).

	BEN	TOL	ETH	XYL	NHE	TMP	H2S	FDE	MET	HAP
Process Heaters or Boilers	0	0	0	0	0	0	0	0	0	0
Storage Tanks	0	0	0	0	0	0	0	0	0	0
Venting or Blowdowns	0	0	0	0	0	0	0	0	0	0
Combustion Control Devices	0	0	0	0	0	0	0	0	0	0
Non-Road Internal Combustion Engines	0	0	0	0	0	0	0	0	0	0
Drill Mud	0	0	0	0	0	0	0	0	0	0
Flowback or Completions	0	0	0	0	0	0	0	0	0	0
Loadout	0	0	0	0	0	0	0	0	0	0

Production Emissions

Complete the following chart based on the estimated total equipment emissions (in lbs) for the Oil & Gas Location once the Oil & Gas Location has entered the production stage, for Hazardous Air Pollutants (HAP). The table should be filled out based on ONE year of operation.

	BEN	TOL	ETH	XYL	NHE	TMP	H2S	FDE	MET	HAP
Stationary Engines or Turbines	26	9	0	3	0	0	0	1220	50	1309
Process Heaters or Boilers	0	0	0	0	0	0	0	0	0	0
Storage Tanks	28	20	2	6	175	1	0	0	0	232
Dehydration Units	0	0	0	0	0	0	0	0	0	0
Pneumatic Pumps	0	0	0	0	0	0	0	0	0	0
Pneumatic Controllers	0	0	0	0	0	0	0	0	0	0
Separators	0	0	0	0	0	0	0	2	0	2
Fugitives	1	2	1	2	7	0	0	0	0	13
Venting or Blowdowns	35	20	2	5	156	0	0	0	0	218
Combustion Control Devices	0	0	0	0	0	0	0	0	0	0
Non-Road Internal Combustion Engines	0	0	0	0	0	0	0	0	0	0
Loadout	2	0	0	0	14	0	0	0	0	15
Well Bradenhead	0	0	0	0	3	0	0	0	0	3
Well Maintenance	0	0	0	0	0	0	0	0	0	0

Provide a qualitative evaluation of any potential acute or chronic, short- or long-term incremental impacts to public health as a result of the estimated total pre-production hazardous air pollutant emissions.

None. This is an existing location. There will not be any future drilling activities on this pad. Production Only.

Provide a qualitative evaluation of any potential acute or chronic, short- or long-term incremental impacts to public health as a result of the estimated annual production hazardous air pollutant emissions.

In 2019, Crestone hired a third-party expert from CTEH, LLC, to design and perform studies to characterize the short-term impacts on local air quality and public health from discrete operational phases at four oil and natural gas well pads being developed in Weld County, Colorado. It is important to note that Crestone is using similar technologies and practices for the Prosper Farms Well Site as was used in the four locations in the studies. The specific goals of this project were to: (1) collect a high-resolution data set of chemical concentrations in air near the well pad and the surrounding communities; and (2) evaluate the impact on risks to public health, if any, from the release of oil and gas-related compounds into the air during specific operational phases of well development. CTEH conducted real-time air monitoring for total VOCs, hydrogen sulfide ("H2S"), particulate matter ("PM"), and specific VOCs (such as benzene), simultaneously with other measurements. As the report states in its Executive Summary: More than 5,000 total measurements were collected in real-time by CTEH personnel in the communities surrounding the wellpads over a period of 26 days. Additionally, 20 analytical samples were collected from four locations around the Big Horn wellpad to evaluate potential community exposures over 5 days of flowback activities. Approximately 99% of the real-time VOC measurements recorded in the communities were non-detections, which means that VOCs were not present or that VOC concentrations were less than the instrument detection limit of 1 ppb [part per billion] for VOCs. This detection limit is well below the federal (ATSDR [Agency for Toxic Substances and Disease Registry]) health guideline level for short-term adverse health effects for benzene (9 ppb). Of the over 1,500 measurements collected for benzene specifically or VOCs in general, just one reading was at a detectable level but did not exceed public health guideline values for the BTEX compounds. No H2S was ever detected [at a detection limit of 0.1 part per million], and just one of over 1,500 readings taken for PM, taken on along a dirt road, was higher than typical background values. In the 20 analytical air samples collected in the surrounding community during flowback, the maximum measured concentrations for BTEX compounds were also all 10 to 13,000-times lower than their respective federal acute health guideline values.

... the real-time and analytical data indicate no adverse health risks to nearby communities, including sensitive individuals, from cumulative exposures to VOCs that may be emitted from pre-production and production activities at Crestone well pads.

Since Crestone is planning to use similar practices and technologies for the Prosper Farms Well Site as was used in the four locations in Weld County, we expect similar outcomes at Prosper Farms.

Dust Impacts

The following are the estimated number of truck trips traveling on or off the Oil & Gas Location.

Total	During Construction	During Drilling	During Completions	During Interim Reclamation	During Production
Monthly	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>200</u>
Annual	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>17033</u>

Estimated total pounds (lbs) of proppant to be used during completions activities. 0

Provide the type of proppant(s) that are planned to be used during completions activities.

None. This is an existing location. There will not be any future drilling activities on this pad. Production Only.

Provide an evaluation of the proposed proppant management system that will be used to minimize dust during completions activities, including the estimated amount of silica dust that will leave the Oil & Gas Location.

None. This is an existing location. There will not be any future drilling activities on this pad. Production Only.

EXISTING OIL & GAS

Total number of oil & gas locations within 1-mile of the Oil & Gas Location:

	Total Number of Locations		Total Number of Wells
Active, built	<u>4</u>	Active, built	<u>5</u>
Permitted by COGCC, unbuilt	<u>0</u>	Permitted by COGCC, unbuilt	<u>0</u>
Permitted by Relevant Local Government & not COGCC, unbuilt	<u>0</u>	Proposed	<u>0</u>
Proposed	<u>0</u>	Plugged and Abandoned	<u>0</u>

Total acreage disturbance during construction of the active and proposed oil & gas locations within 1-mile of the proposed Oil & Gas Location: 36.89

Source for acreage total:

- ☐ Field Observation/Measurement
- ☒ COGCC Location Files
- ☐ Aerial Photos/Other
- ☐ Other

If "Other" is selected, please describe the source use to determine the acreage total for construction disturbance of the active and proposed oil & gas locations within 1-mile of the proposed Oil & Gas Location.

Total permitted capacity of on-location storage (in number of pits and tanks) of the active and proposed oil & gas locations within 1-mile of the Oil & Gas Location :
NOTE: providing the existing number of pits and tanks on surrounding existing locations is optional.

Source for storage totals:		Permitted Onsite Storage Capacity	Existing Onsite Storage Capacity
<input type="checkbox"/> Field Observation/Measurement	Oil	27	27
<input checked="" type="checkbox"/> COGCC Location Files	Condensate	1	1
<input type="checkbox"/> Aerial Photos/Other	Produced Water	9	9
<input type="checkbox"/> Other	Pits	0	0

If "Other" is selected, please describe the source use to determine the tank totals for the active and proposed oil & gas locations within 1-mile of the proposed Oil & Gas Location.

3 Oil & Gas Location Name: Property Reserve 4-65 3-4 Number: 1H Status: Active, built

OIL & GAS LOCATION INFORMATION

Form 2A Doc#: 402289831

Loc ID#: 437752

Oil & Gas Location: QTRQTR: SESE Sec: 3 Twp: 4S Rng: 65W Meridian: 6

Total number of wells planned: 0

Operations Duration

Estimated total number of weeks to construct this Oil & Gas Location: 0

Estimated total number of weeks to drill all planned wells for this Oil & Gas Location: 0

Number of planned drilling occupations to drill all planned wells for this Oil & Gas Location: 0

Estimated total number of weeks to complete all planned wells for this Oil & Gas Location: 0

Number of planned completions occupations to complete all planned wells for this Oil & Gas Location: 0

Will there be simultaneous drilling and completions operations occurring at this Oil & Gas Location? No

Estimated total number of months the Oil & Gas Location will be active, prior to abandonment and reclamation: 240

Noise Impacts

Provide a qualitative evaluation of the incremental adverse noise impacts to the surrounding receptors during the pre-production activities at this Oil & Gas Location.

None. This is an existing location. There will not be any future drilling activities on this pad. Production Only.

Provide a qualitative evaluation of the incremental adverse noise impacts to the surrounding receptors during the production stage of this Oil & Gas Location.

Noise during the production phase will be limited to well maintenance and inspections. There will be minimal impacts from noise.

Light Impacts

Provide a qualitative evaluation of the incremental adverse light impacts to the surrounding receptors during the pre-production activities at this Oil & Gas Location.

None. This is an existing location. There will not be any future drilling activities on this pad. Production Only.

Provide a qualitative evaluation of the incremental adverse light impacts to the surrounding receptors during the production stage of this Oil & Gas Location.

There are no permanent lights installed on the existing location. The only lights that will be on location are from trucks hauling water.

Odor Impacts

Provide a qualitative evaluation of the incremental adverse odor impacts to the surrounding receptors during the pre-production activities at this Oil & Gas Location.

None. This is an existing location. There will not be any future drilling activities on this pad. Production Only.

Provide a qualitative evaluation of the incremental adverse odor impacts to the surrounding receptors during the production stage of this Oil & Gas Location.

The odor during the production stage is minimal as indicated by the Emissions data. There is also minimal traffic during production.

WATER RESOURCES

☒ This Oil & Gas Location is listed as a sensitive area for water resources.

☐ This Oil & Gas Location is within 2,640 feet of a surface Water of the State.

Estimated depth to groundwater: 22

Estimated total planned on-location storage capacity of the Oil & Gas Location for:

	Number of Tanks	Total Volume (bbls)
Oil	<u>3</u>	<u>1500</u>
Condensate	<u>0</u>	<u>0</u>
Produced Water	<u>1</u>	<u>500</u>
Other volumes of stored fluids, hydrocarbons, chemicals, or E&P Waste Fluids	<u>0</u>	<u>0</u>

List, with volumes, the "Other" fluids planned to be stored on the Oil & Gas Location, including, but not limited to: hydrocarbons, chemicals, or E&P Waste fluids.

N/A

Potential Impacted Surface Water Resources

Provide the distance and direction of the contaminant migration pathway from the Oil & Gas Location to the nearest downstream riparian corridors, wetlands, and surface Waters of the State. Also provide an evaluation of the baseline condition of the nearest downstream riparian corridors, wetlands, and surface Waters of the State.

Enter 2,640 for distances greater than 1/2-mile. Distances are measured along the migration pathway, not a straight line from the edge of the Oil & Gas Location.

	Distance	Direction	Evaluation of Baseline Condition
Riparian Corridor	<u>5280</u>	<u>SW</u>	<u>Not Applicable</u>
Wetland	<u>498</u>	<u>S</u>	<u>The Freshwater Pond habitat is classified as a PUBGx.</u>
Surface Waters of the State	<u>498</u>	<u>S</u>	<u>The Surface waters of the State is a Freshwater Pond habitat and is classified as a PUBGx.</u>

Potential Impacts to Public Water Resources

Provide the distance, direction, and evaluation of potential impacts to the nearest Public Water System Intake. Enter 5,280 for distances greater than 1-mile.

	Distance	Direction	Evaluation of Baseline Condition
Public Water System Intake	<u>5280</u>	<u>S</u>	<u>This is an existing location. There are no future drilling activities planned. Production Only.</u>

Estimated Water Usage

Provide the estimated total volumes of the following that are anticipated to be used during the drilling and completions stage of the Oil & Gas Location activity.

Water Source	Volume (bbls)		Volume (bbls)		Volume (bbls)	
Surface Water	<u>0</u>	Recycled Water (Produced Water)	<u>0</u>	Unspecified Source	<u>0</u>	Percentage Recycled Water <u>0</u> %
Ground Water	<u>0</u>	Recycled Water (non-Produced Water)	<u>0</u>	Total Water Usage	<u>0</u>	

If an unspecified water source is planned to be used, provide a description of the source.

This is an existing location. There are no future drilling activities planned. Production Only.

Evaluate the measures being taken to reduce freshwater use, including reusing and recycling produced water.

This is an existing location. There are no future drilling activities planned. Production Only.

ECOSYSTEM & WILDLIFE RESOURCES

List High Priority Habitats (HPH) that occur within one mile of the Oil & Gas Location and list the distance from working pad surface. If the location is partially or entirely within a HPH list the distance as '0' and provide the estimated acreage disturbance of that HPH by the location construction.

High Priority Habitat (HPH) Name:	Distance	Estimated Acreage Disturbed
Aquatic Native Species Conservation Waters	4245	0

List total size of disturbed acreage and disturbed High Priority Habitat (HPH) area (in acres) during the Oil & Gas Location construction and after interim reclamation.

	Total Acreage (acres)	Total HPH Acreage (acres)	Provide any further information regarding the location's HPH disturbance.
Construction	0	0	This is an existing location. There are no future drilling activities planned. Production Only.
Post-interim Reclamation	4	0	

Provide the acreage of the existing land use types that occur within one mile of the Oil & Gas Location. Note: a circle with a one mile radius is approximately 2010 acres.

		Existing Acreage		Existing Acreage		Existing Acreage		Existing Acreage
Crop Land:	Irrigated	0	Non-Irrigated		Conservation Reserve Program(CRP)	0		
Non-Crop Land:	Rangeland	0	Forestry	0	Recreation	0	Other	0
Subdivided:	Industrial	0	Commercial	0	Residential	0		

If any land use is industrial, provide a description of the use or operation of the industrial facilities.

N/A

If any land use is "Other", provide a description of the land use.

N/A

If any portion of the land use for the proposed oil and gas location includes Rangeland, Forestry, or Recreation, provide a list of the plant community or communities and estimated acreage disturbed for each:

	Estimated Disturbed Acreage		Estimated Disturbed Acreage		Estimated Disturbed Acreage		Estimated Disturbed Acreage
Disturbed Grassland	0	Shrub Land	0	Mountain Riparian	0	Wetland Aquatic	0
Native Grassland	0	Plains Riparian	0	Forest Land	0	Alpine	0

Provide a qualitative evaluation of incremental adverse impacts to ecosystems, including any plant communities, as a result of Oil and Gas Operations associated with the proposed Oil & Gas Location.

As this location is already constructed, there would be minimal adverse impacts to the ecosystems.

Soil Resources

List all soil map units that occur within the Oil & Gas Location and list the estimated total area (in acres) disturbance of each soil map unit.

NRCS Map Unit Name:	Estimated Disturbed Acreage
Weld-Deertrail Silt Loams, 0 to 3 percent slopes	0
Adena-Colby silt loams, 1 to 5 percent slopes	0

PUBLIC WELFARE

☐ This Oil & Gas Location lies within a Disproportionately Impacted Community as defined in the 100-series rules.

Building Units within 1-mile

0'-2,000'

2,001'-5,280'

Total number of Residential Building Units:

0

0

Total Number of non-school AND non child care center High Occupancy Building Units:

0

0

Total number of School Facilities:

0

0

Total number of Child Care Centers:

0

0

Recreation and Scenic Value

List all State Parks, State Trust Lands, or State Wildlife Area within 1-mile of the Oil & Gas Location.

N/A

List all Designated Outdoor Activity Areas within 1-mile of the Oil & Gas Location.

N/A

List all mapped trails that support any of the following recreational activities within 1-mile of the Oil & Gas Location: Hiking, Biking, Horseback Riding, Motorcycle Riding, ATV Riding, OHV, Nordic Skiing, Snowmobiling, or Snowshoeing.

N/A

AIR RESOURCES**Pre-Production Emissions**

Complete the following chart based on the estimated total equipment emissions (in tons) for the Oil & Gas Location during the pre-production (construction, drilling, completions) stage for Criteria Pollutants by equipment type.

	NOx	CO	VOCs	Methane	Ethane	CO2	N2O
Process Heaters or Boilers	0	0	0	0	0	0	0
Storage Tanks	0	0	0	0	0	0	0
Venting or Blowdowns	0	0	0	0	0	0	0
Combustion Control Devices	0	0	0	0	0	0	0
Non-Road Internal Combustion Engines	0	0	0	0	0	0	0
Drill Mud	0	0	0	0	0	0	0
Flowback or Completions	0	0	0	0	0	0	0
Loadout	0	0	0	0	0	0	0

Production Emissions

Complete the following chart based on the estimated full facility equipment emissions (in tons) for the Oil & Gas Location once the Oil & Gas Location has entered the production stage, for Criteria Pollutants. The table should be filled out based on ONE year of operation.

	NOx	CO	VOCs	Methane	Ethane	CO2	N2O
Stationary Engines or Turbines	2.35	4.69	1.64	1.89	0.58	904.66	0
Process Heaters or Boilers	0.31	0.26	0.02	0.01	0.01	366.7	0
Storage Tanks	0	0	0.69	34.46	364.36	26.68	0
Dehydration Units	0	0	0	0	0	0	0
Pneumatic Pumps	0	0	0	0	0	0	0
Pneumatic Controllers	0	0	0	0	0	0	0
Separators	0.31	0.26	0.02	0.01	0.01	366.7	0
Fugitives			0.06	0.02	0.01	0	
Venting or Blowdowns	0	0	0.9	0.54	0.22	0.06	0
Combustion Control Devices	0.91	4.15	0	0	0	0	0.01
Loadout	0	0	0.11	34.3	364.21	26.53	0
Non-Road Internal Combustion Engines	0	0	0	0	0	0	0
Well Bradenhead	0	0	0.08	0.01	11.49	3.12	0
Well Maintenance	0	0	0	0	0	0	0

Diesel Vehicle Road Miles

Complete the following chart for diesel vehicle road miles during each stage of oil and gas location operations.

During Construction: 0

During Completions: 0

During Drilling: 0

During Interim Reclamation: 0

PUBLIC HEALTH RESOURCES**Pre-Production Emissions**

Complete the following chart based on the estimated total equipment emissions (in lbs) for the Oil & Gas Location during the pre-production (construction, drilling, completions) stage for Hazardous Air Pollutants (HAP).

	BEN	TOL	ETH	XYL	NHE	TMP	H2S	FDE	MET	HAP
Process Heaters or Boilers	0	0	0	0	0	0	0	0	0	0
Storage Tanks	0	0	0	0	0	0	0	0	0	0
Venting or Blowdowns	0	0	0	0	0	0	0	0	0	0
Combustion Control Devices	0	0	0	0	0	0	0	0	0	0
Non-Road Internal Combustion Engines	0	0	0	0	0	0	0	0	0	0
Drill Mud	0	0	0	0	0	0	0	0	0	0
Flowback or Completions	0	0	0	0	0	0	0	0	0	0
Loadout	0	0	0	0	0	0	0	0	0	0

Production Emissions

Complete the following chart based on the estimated total equipment emissions (in lbs) for the Oil & Gas Location once the Oil & Gas Location has entered the production stage, for Hazardous Air Pollutants (HAP). The table should be filled out based on ONE year of operation.

	BEN	TOL	ETH	XYL	NHE	TMP	H2S	FDE	MET	HAP
Stationary Engines or Turbines	26	9	0	3	0	0	0	1220	50	1309
Process Heaters or Boilers	0	0	0	0	0	0	0	0	0	0
Storage Tanks	7	5	1	2	44	0	0	0	0	58
Dehydration Units	0	0	0	0	0	0	0	0	0	0
Pneumatic Pumps	0	0	0	0	0	0	0	0	0	0
Pneumatic Controllers	0	0	0	0	0	0	0	0	0	0
Separators	0	0	0	0	0	0	0	0	0	0
Fugitives	1	1	0	1	3	0	0	0	0	6
Venting or Blowdowns	15	8	1	2	57	0	0	0	0	82
Combustion Control Devices	0	0	0	0	0	0	0	0	0	0
Non-Road Internal Combustion Engines	0	0	0	0	0	0	0	0	0	0
Loadout	0	0	0	0	0	0	0	0	0	0
Well Bradenhead	0	0	0	0	3	0	0	0	0	3
Well Maintenance	0	0	0	0	0	0	0	0	0	0

Provide a qualitative evaluation of any potential acute or chronic, short- or long-term incremental impacts to public health as a result of the estimated total pre-production hazardous air pollutant emissions.

None. This is an existing location. There will not be any future drilling activities on this pad. Production Only.

Provide a qualitative evaluation of any potential acute or chronic, short- or long-term incremental impacts to public health as a result of the estimated annual production hazardous air pollutant emissions.

In 2019, Crestone hired a third-party expert from CTEH, LLC, to design and perform studies to characterize the short-term impacts on local air quality and public health from discrete operational phases at four oil and natural gas well pads being developed in Weld County, Colorado. It is important to note that Crestone is using similar technologies and practices for the Prosper Farms Well Site as was used in the four locations in the studies. The specific goals of this project were to: (1) collect a high-resolution data set of chemical concentrations in air near the well pad and the surrounding communities; and (2) evaluate the impact on risks to public health, if any, from the release of oil and gas-related compounds into the air during specific operational phases of well development. CTEH conducted real-time air monitoring for total VOCs, hydrogen sulfide ("H2S"), particulate matter ("PM"), and specific VOCs (such as benzene), simultaneously with other measurements. As the report states in its Executive Summary: More than 5,000 total measurements were collected in real-time by CTEH personnel in the communities surrounding the wellpads over a period of 26 days. Additionally, 20 analytical samples were collected from four locations around the Big Horn wellpad to evaluate potential community exposures over 5 days of flowback activities. Approximately 99% of the real-time VOC measurements recorded in the communities were non-detections, which means that VOCs were not present or that VOC concentrations were less than the instrument detection limit of 1 ppb [part per billion] for VOCs. This detection limit is well below the federal (ATSDR [Agency for Toxic Substances and Disease Registry]) health guideline level for short-term adverse health effects for benzene (9 ppb). Of the over 1,500 measurements collected for benzene specifically or VOCs in general, just one reading was at a detectable level but did not exceed public health guideline values for the BTEX compounds. No H2S was ever detected [at a detection limit of 0.1 part per million], and just one of over 1,500 readings taken for PM, taken on along a dirt road, was higher than typical background values. In the 20 analytical air samples collected in the surrounding community during flowback, the maximum measured concentrations for BTEX compounds were also all 10 to 13,000-times lower than their respective federal acute health guideline values. ... the real-time and analytical data indicate no adverse health risks to nearby communities, including sensitive individuals, from cumulative exposures to VOCs that may be emitted from pre-production and production activities at Crestone wellpads. Since Crestone is planning to use similar practices and technologies for the Prosper Farms Well Site as was used in the four locations in Weld County, we expect similar outcomes at Prosper Farms.

Dust Impacts

The following are the estimated number of truck trips traveling on or off the Oil & Gas Location.

Total	During Construction	During Drilling	During Completions	During Interim Reclamation	During Production
Monthly	0	0	0	0	200
Annual	0	0	0	0	17033

Estimated total pounds (lbs) of proppant to be used during completions activities. 0

Provide the type of proppant(s) that are planned to be used during completions activities.

None. This is an existing location. There will not be any future drilling activities on this pad. Production Only.

Provide an evaluation of the proposed proppant management system that will be used to minimize dust during completions activities, including the estimated amount of silica dust that will leave the Oil & Gas Location.

None. This is an existing location. There will not be any future drilling activities on this pad. Production Only.

EXISTING OIL & GAS

Total number of oil & gas locations within 1-mile of the Oil & Gas Location:

	Total Number of Locations		Total Number of Wells
Active, built	5	Active, built	12
Permitted by COGCC, unbuilt	0	Permitted by COGCC, unbuilt	0
Permitted by Relevant Local Government & not COGCC, unbuilt	0	Proposed	0
Proposed	0	Plugged and Abandoned	0

Total acreage disturbance during construction of the active and proposed oil & gas locations within 1-mile of the proposed Oil & Gas Location: 48.92

Source for acreage total:

- ☐ Field Observation/Measurement
- ☒ COGCC Location Files
- ☐ Aerial PhotosOther
- ☐ Other

If "Other" is selected, please describe the source use to determine the acreage total for construction disturbance of the active and proposed oil & gas locations within 1-mile of the proposed Oil & Gas Location.

Total permitted capacity of on-location storage (in number of pits and tanks) of the active and proposed oil & gas locations within 1-mile of the Oil & Gas Location :
NOTE: providing the existing number of pits and tanks on surrounding existing locations is optional.

Source for storage totals:

- ☐ Field Observation/Measurement
☒ COGCC Location Files
☐ Aerial Photos
☐ Other

	Permitted Onsite Storage Capacity	Existing Onsite Storage Capacity
Oil	34	34
Condensate	1	1
Produced Water	11	11
Pits	0	0

If "Other" is selected, please describe the source use to determine the tank totals for the active and proposed oil & gas locations within 1-mile of the proposed Oil & Gas Location.

OIL & GAS DEVELOPMENT PLAN-SCALE DATA

List High Priority Habitats (HPH) that are estimated be disturbed by the construction of new roads, including access roads, pipelines, and utilities for this OGD, along with the estimated disturbed acreage of each HPH.

No HPH Identified

List the total estimated of disturbed acreage and the total disturbed High Priority Habitat (HPH) area (in acres) during construction and the acreage that will remain disturbed after interim reclamation of the following for the entire OGD:

	Construction			Post-interim Reclamation	
	Total Acreage (acres)	Total HPH Acreage (acres)		Total Acreage (acres)	Total HPH Acreage (acres)
New roads, including access roads	0	0	New roads, including access roads	0	0
Pipelines	0	0	Pipelines	0	0
Utilities	0	0	Utilities	0	0

Provide any further information regarding the HPH disturbance from the construction of new roads, including access roads, pipelines, and utilities for this OGD.

Number of miles of the existing lease road that are planned to be used to access these location(s): 0.37

BENEFICIAL IMPACT INFORMATION

Equipment and Facility Removal

Total number of existing wells that are planned to be plugged and abandoned as part of this OGD: 0

Total number of existing locations that are planned to be closed and undergo final reclamation as part of this OGD: 0

Total number of acres that are planned to be reclaimed through the closing of existing locations: 0

Total number of existing pits that are planned to be closed and undergo final reclamation as part of this OGD: 0

Estimated number of vehicle trips that are planned to be prevented from the above mentioned facility closures and equipment upgrades (on an annual basis): 0

Total number of tanks planned to be removed from existing locations through the approval of this OGD:

Oil Tanks: 0
Condensate Tanks: 0
Produced Water Tanks: 0

Provide a qualitative evaluation of any incremental beneficial impacts to the surrounding community directly and indirectly from this OGD.

There will be beneficial impacts to the surrounding community in the form of taxes paid by the operator.

Provide a qualitative evaluation of any incremental beneficial impacts to the surrounding wildlife and ecosystems directly and indirectly from this OGD.

There are no incremental beneficial impact to the surrounding wildlife and ecosystem.

MITIGATION INFORMATION

No Mitigation Measures Listed

OPERATOR COMMENTS AND SUBMITTAL

Print Name: Andrea Gross

Title: Permit Agent

Email: agross@upstreampm.com

Date: _____

Based on the information provided herein, this Cumulative Impacts Data Identification Form 2B complies with COGCC Rules and is hereby accepted into the Cumulative Impacts Data Evaluation Repository (CIDER database).
Contact OGLA Staff for consultation.

COGCC Approved: _____

Director of COGCC

Date: _____

Attachment Check List

Att Doc Num

Name

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Total Attach: 0 Files

General Comments

User Group

Comment

Comment Date

		Stamp Upon Approval
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Total: 0 comment(s)