

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: [X] OGD P [ ] Partial 2B - Rule 803.b.(2).A UIC Conversion

OPERATOR INFORMATION

OGCC Operator Number: 10797 Contact Name and Telephone: Wesley Marshall
Name of Operator: DESERT EAGLE OPERATING LLC
Address: 17101 PRESTON RD SUITE 105
City: DALLAS State: TX Zip: 75248
Phone: (214) 886-5098
Email: wmarshall@prohelium.com

OIL & GAS DEVELOPMENT PLAN INFORMATION

Oil & Gas Development Plan Name: Red Rocks
Oil & Gas Development Plan Docket #: 221200368
Oil & Gas Development Plan ID #: 480749
This OGD P is included in a Comprehensive Area Plan. CAP ID #:

OIL & GAS LOCATION DATA

1 Oil & Gas Location Name: Red Rocks Number: 1-14 Status: Proposed

OIL & GAS LOCATION INFORMATION

Form 2A Doc#: 403146838
Loc ID#:
Oil & Gas Location: QTRQTR: NENW Sec: 1 Twp: 30S Rng: 55W Meridian: 6
Total number of wells planned: 1

Operations Duration

Estimated total number of weeks to construct this Oil & Gas Location: 1
Estimated total number of weeks to drill all planned wells for this Oil & Gas Location: 1
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: 1
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: 120

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.

No adverse impact. The location is remote. The nearest residential building unit is greater than 1 mile away. There is no High Priority Habitat within 1 mile. The single conventional vertical well will be drilled and completed over approximately 7 to 10 days with a water well-sized drill rig.

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

No adverse impact. The location will have no powered equipment. It will operate at < 55 dBA for agricultural land use at Rule 423.b.(1).

**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.

No adverse impact. Well development will occur during daylight hours.

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

No adverse impact. The location will not be lit during production.

**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.

No adverse impact. The location supports a helium gas well. It will be drilled without mud. There is no anticipated H2S, hydrocarbons, or odor.

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

No adverse impact. The location supports a helium gas well. There is no anticipated H2S, hydrocarbons, or odor.

**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: 1200

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

	Number of Tanks	Total Volume (bbls)
Oil	<u>0</u>	<u>0</u>
Condensate	<u>0</u>	<u>0</u>
Produced Water	<u>0</u>	<u>0</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.

None

**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>2640</u>	<u>S</u>	<u>No riparian corridor within 2,640'</u>
Wetland	<u>2640</u>	<u>S</u>	<u>Not field delineated</u>
Surface Waters of the State	<u>2640</u>	<u>E</u>	<u>Nearest feature is a field verified dry gully lacking an ordinary high water mark</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.

Public Water System Intake 5280 SE There is no Public Water System Intake within 5,280'

**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>100</u>	Recycled Water (non-Produced Water)	<u>0</u>	Total Water Usage	<u>100</u>	

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

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

Water from beneficial reuse is unavailable. There will be no hydraulic fracturing. Total water use is estimated to be limited to 4200 gallons because the well will be drilled with air.

**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
N/A	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.
Construction	<u>1.1</u>	<u>0</u>	
Post-interim Reclamation	<u>0.2</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	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>2010</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.

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

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>1.1</u>	Shrub Land	<u>0</u>	Mountain Riparian	<u>0</u>	Wetland Aquatic	<u>0</u>
Native Grassland	<u>0</u>	Plains Riparian	<u>0</u>	Forest Land	<u>0</u>	Alpine	<u>0</u>

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.

No adverse impacts. The area is rangeland previously disturbed from dirt roads, cattle grazing, and oil and gas development. After well development, the Working Pad Surface will be reduced to approximately 0.2 acres. Vegetation consists of blue grama, sideoats grama, western wheatgrass, Great Plains yucca, one-seed juniper, Plains prickly pear, and tree cholla.

**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
VT - Villedry-Travessilla complex, 1 to 8 percent slopes	1.1

**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.

None

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

None

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.

None

**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	0.28	0.26	0.02	0.002	0	43.2	0.0003
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	0	0	0	0	0	0	0
Process Heaters or Boilers	0	0	0	0	0	0	0
Storage Tanks	0	0	0	0	0	0	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	0	0	0	0	0	0	0
Fugitives			0	0	0	0		
Venting or Blowdowns	0	0	0	0	0	0	0	0
Combustion Control Devices	0	0	0	0	0	0	0	0
Loadout	0	0	0	0	0	0	0	0
Non-Road Internal Combustion Engines	0	0	0	0	0	0	0	0
Well Bradenhead	0	0	0	0	0	0	0	0
Well Maintenance	0	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:	<u>156</u>	During Completions:	<u>312</u>
During Drilling:	<u>1248</u>	During Interim Reclamation:	<u>156</u>
During Production:	<u>1248</u>		

**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	0.15	0.06	0	0.02	0	0	0	0.02	0	0.25
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	0	0	0	0	0	0	0	0	0	0
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
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	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
Loadout	0	0	0	0	0	0	0	0	0	0
Well Bradenhead	0	0	0	0	0	0	0	0	0	0
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.

No impact to public health. The nearest residential building unit is greater than 1 mile away. The internal combustion engine needed for well drilling will be needed for a short duration of 7 to 10 days.

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.

No impact to public health. The nearest residential building unit is greater than 1 mile away. The well is anticipated to produce helium without hydrocarbons, based on recent well information for this area.

**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	2	16	4	2	16
Annual	2	16	4	2	192

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.

N/A

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.

N/A

**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	1	1
Permitted by COGCC, unbuilt	0	0
Permitted by Relevant Local Government & not COGCC, unbuilt	0	1
Proposed	1	1

Total acreage disturbance during construction of the active and proposed oil & gas locations within 1-mile of the proposed Oil & Gas Location: 2.2

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 checked="" type="checkbox"/> Field Observation/Measurement	Oil <u>0</u>	<u>0</u>
<input checked="" type="checkbox"/> COGCC Location Files	Condensate <u>0</u>	<u>0</u>
<input type="checkbox"/> Aerial Photos/Other	Produced Water <u>0</u>	<u>0</u>
<input type="checkbox"/> Other	Pits <u>0</u>	<u>0</u>

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: Red Rocks Number: 1-16 Status: Proposed

**OIL & GAS LOCATION INFORMATION**

Form 2A Doc#: 403185555

Loc ID#: \_\_\_\_\_

Oil & Gas Location: QTRQTR: NENE Sec: 1 Twp: 30S Rng: 55W Meridian: 6

Total number of wells planned: 1

**Operations Duration**

Estimated total number of weeks to construct this Oil & Gas Location: 1

Estimated total number of weeks to drill all planned wells for this Oil & Gas Location: 1

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: 1

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: 120

**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.

No adverse impact. The location is remote. The nearest residential building unit is greater than 1 mile away. There is no High Priority Habitat within 1 mile. The single conventional vertical well will be drilled and completed over approximately 7 to 10 days with a water well-sized drill rig.

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

No adverse impact. The location will have no powered equipment. It will operate at < 55 dBA for agricultural land use at Rule 423.b.(1).

**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.

No adverse impact. Well development will occur during daylight hours.

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

No adverse impact. The location will not be lit during production.

**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.

No adverse impact. The location supports a helium gas well. It will be drilled without mud. There is no anticipated H2S, hydrocarbons, or odor.

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

No adverse impact. The location supports a helium gas well. There is no anticipated H2S, hydrocarbons, or odor.

**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: 1200

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

	Number of Tanks	Total Volume (bbls)
Oil	<u>0</u>	<u>0</u>
Condensate	<u>0</u>	<u>0</u>
Produced Water	<u>0</u>	<u>0</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.

None

**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>2640</u>	<u>S</u>	<u>No riparian corridor within 2,640'</u>
Wetland	<u>2640</u>	<u>S</u>	<u>Not field delineated</u>
Surface Waters of the State	<u>2500</u>	<u>N</u>	<u>Man-made on-channel impoundment</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>SE</u>	<u>There is no Public Water System Intake within 5,280'</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)	Percentage Recycled Water	
Surface Water	<u>0</u>	Recycled Water (Produced Water) <u>0</u>	Unspecified Source <u>0</u>	<u>0</u>	%
Ground Water	<u>100</u>	Recycled Water (non-Produced Water) <u>0</u>	Total Water Usage <u>100</u>		

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

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

Water from beneficial reuse is unavailable. There will be no hydraulic fracturing. Total water use is estimated to be limited to 4200 gallons because the well will be drilled with air.

**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
N/A	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.
Construction	1.1	0	
Post-interim Reclamation	0.2	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	0	Conservation Reserve Program(CRP)	0		
Non-Crop Land: Rangeland	2010	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.

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

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	1.1	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.

No adverse impacts. The area is rangeland previously disturbed from dirt roads, cattle grazing, and oil and gas development. After well development, the Working Pad Surface will be reduced to approximately 0.20 acres. Vegetation consists of blue grama, sideoats grama, western wheatgrass, Great Plains yucca, one-seed juniper, Plains prickly pear, and tree cholla.

**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
VT - Villedry-Travessilla complex, 1 to 8 percent slopes	1.1

**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.

None

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

None

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.

None

**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	0.28	0.26	0.02	0.002	0	43.2	0.0003
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	0	0	0	0	0	0	0
Process Heaters or Boilers	0	0	0	0	0	0	0
Storage Tanks	0	0	0	0	0	0	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	0	0	0	0	0	0
Fugitives			0	0	0	0	
Venting or Blowdowns	0	0	0	0	0	0	0
Combustion Control Devices	0	0	0	0	0	0	0
Loadout	0	0	0	0	0	0	0
Non-Road Internal Combustion Engines	0	0	0	0	0	0	0
Well Bradenhead	0	0	0	0	0	0	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: 158                      During Completions: 316  
 During Drilling: 1264                      During Interim Reclamation: 158  
 During Production: 1264

**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	0.15	0.06	0	0.02	0	0	0	0.02	0	0.25
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	0	0	0	0	0	0	0	0	0	0
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
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	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
Loadout	0	0	0	0	0	0	0	0	0	0
Well Bradenhead	0	0	0	0	0	0	0	0	0	0
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.

No impact to public health. The nearest residential building unit is greater than 1 mile away. The internal combustion engine needed for well drilling will be needed for a short duration of 7 to 10 days.

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.

No impact to public health. The nearest residential building unit is greater than 1 mile away. The well is anticipated to produce helium without hydrocarbons, based on recent well information for this area.

**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	2	16	4	2	16
Annual	2	16	4	2	192

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.

N/A

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.

N/A

**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	1	1
Permitted by COGCC, unbuilt	0	0

Permitted by Relevant Local Government & not COGCC, unbuilt 0  
 Proposed 1

Proposed 1  
 Plugged and Abandoned 1

Total acreage disturbance during construction of the active and proposed oil & gas locations within 1-mile of the proposed Oil & Gas Location: 2.2

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:

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

	Permitted Onsite Storage Capacity	Existing Onsite Storage Capacity
Oil	<u>0</u>	<u>0</u>
Condensate	<u>0</u>	<u>0</u>
Produced Water	<u>0</u>	<u>0</u>
Pits	<u>0</u>	<u>0</u>

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: Red Rocks Number: 35-08 Status: Proposed

**OIL & GAS LOCATION INFORMATION**

Form 2A Doc#: 403254324

Loc ID#: \_\_\_\_\_

Oil & Gas Location: QTRQTR: NESE Sec: 35 Twp: 29S Rng: 55W Meridian: 6

Total number of wells planned: 1

**Operations Duration**

Estimated total number of weeks to construct this Oil & Gas Location: 1

Estimated total number of weeks to drill all planned wells for this Oil & Gas Location: 1

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: 1

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: 120

**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.

No adverse impact. The location is remote. The nearest residential building unit is greater than 1 mile away. There is no High Priority Habitat within 1 mile. The single conventional vertical well will be drilled and completed over approximately 7 to 10 days with a water well-sized drill rig.

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

No adverse impact. The location will have no powered equipment. It will operate at < 55 dBA for agricultural land use at Rule 423.b.(1).

**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.

No adverse impact. Well development will occur during daylight hours.

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

No adverse impact. The location will not be lit during production.

**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.

No adverse impact. The location supports a helium gas well. It will be drilled without mud. There is no anticipated H2S, hydrocarbons, or odor.

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

No adverse impact. The location supports a helium gas well. There is no anticipated H2S, hydrocarbons, or odor.

**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: 1200

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

	Number of Tanks	Total Volume (bbls)
Oil	<u>0</u>	<u>0</u>
Condensate	<u>0</u>	<u>0</u>
Produced Water	<u>0</u>	<u>0</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.

None

**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>2640</u>	<u>S</u>	<u>No riparian corridor within 2,640'</u>
Wetland	<u>2640</u>	<u>S</u>	<u>Not field delineated</u>

Surface Waters of the State 2640 E Nearest feature is a field verified dry gully lacking an ordinary high water mark

**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 SE There is no Public Water System Intake within 5,280'.

**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)	Percentage
Surface Water	<u>0</u>	Recycled Water (Produced Water) <u>0</u>	Unspecified Source <u>0</u>	<u>0</u> %
Ground Water	<u>100</u>	Recycled Water (non-Produced Water) <u>0</u>	Total Water Usage <u>100</u>	Recycled Water <u>0</u> %

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

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

Water from beneficial reuse is unavailable. There will be no hydraulic fracturing. Total water use is estimated to be limited to 4200 gallons because the well will be drilled with air.

**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
N/A	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.
Construction	<u>1.1</u>	<u>0</u>	
Post-interim Reclamation	<u>0.2</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	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>2010</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.

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

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>1.1</u>	Shrub Land <u>0</u>	Mountain Riparian <u>0</u>	Wetland Aquatic <u>0</u>

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.

No adverse impacts. The area is rangeland previously disturbed from dirt roads, cattle grazing, and oil and gas development. After well development, the Working Pad Surface will be reduced to approximately 0.20 acres. Vegetation consists of blue grama, sideoats grama, western wheatgrass, Great Plains yucca, one-seed juniper, Plains prickly pear, and tree cholla.

### 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
VT - Villedry-Travessilla complex, 1 to 8 percent slopes	1.1

### 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.

None

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

None

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.

None

### 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	0.28	0.26	0.02	0.002	0	43.2	0.0003
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	0	0	0	0	0	0	0
Process Heaters or Boilers	0	0	0	0	0	0	0
Storage Tanks	0	0	0	0	0	0	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	0	0	0	0	0	0
Fugitives			0	0	0	0	
Venting or Blowdowns	0	0	0	0	0	0	0
Combustion Control Devices	0	0	0	0	0	0	0
Loadout	0	0	0	0	0	0	0
Non-Road Internal Combustion Engines	0	0	0	0	0	0	0
Well Bradenhead	0	0	0	0	0	0	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:	<u>158</u>	During Completions:	<u>316</u>
During Drilling:	<u>1264</u>	During Interim Reclamation:	<u>158</u>
During Production:	<u>1264</u>		

**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	0.15	0.06	0	0.02	0	0	0	0.02	0	0.25
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	0	0	0	0	0	0	0	0	0	0
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
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	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
Loadout	0	0	0	0	0	0	0	0	0	0
Well Bradenhead	0	0	0	0	0	0	0	0	0	0
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.

No impact to public health. The nearest residential building unit is greater than 1 mile away. The internal combustion engine needed for well drilling will be needed for a short duration of 7 to 10 days.

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.

No impact to public health. The nearest residential building unit is greater than 1 mile away. The well is anticipated to produce helium without hydrocarbons, based on recent well information for this area.

**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	2	16	4	2	16
Annual	2	16	4	2	192

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.

N/A

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.

N/A

**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	2	2
Permitted by COGCC, unbuilt	0	0
Permitted by Relevant Local Government & not COGCC, unbuilt	0	1
Proposed	1	1
		Plugged and Abandoned

Total acreage disturbance during construction of the active and proposed oil & gas locations within 1-mile of the proposed Oil & Gas Location: 3.3

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
Oil	0	0

- Field Observation/Measurement

<input checked="" type="checkbox"/> COGCC Location Files	Condensate	0	0
<input type="checkbox"/> Aerial Photos	Produced Water	0	0
<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.

4 Oil & Gas Location Name: Red Rocks Number: 35-11 Status: Proposed

**OIL & GAS LOCATION INFORMATION**

Form 2A Doc#: 403254358

Loc ID#: \_\_\_\_\_

Oil & Gas Location: QTRQTR: SENW Sec: 35 Twp: 29S Rng: 55W Meridian: 6

Total number of wells planned: 1

**Operations Duration**

Estimated total number of weeks to construct this Oil & Gas Location: 1

Estimated total number of weeks to drill all planned wells for this Oil & Gas Location: 1

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: 1

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: 120

**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.

No adverse impact. The location is remote. The nearest residential building unit is greater than 1 mile away. There is no High Priority Habitat within 1 mile. The single conventional vertical well will be drilled and completed over approximately 7 to 10 days with a water well-sized drill rig.

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

No adverse impact. The location will have no powered equipment. It will operate at < 55 dBA for agricultural land use at Rule 423.b.(1).

**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.

No adverse impact. Well development will occur during daylight hours.

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

No adverse impact. The location will not be lit during production.

**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.

No adverse impact. The location supports a helium gas well. It will be drilled without mud. There is no anticipated H2S, hydrocarbons, or odor.

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

No adverse impact. The location supports a helium gas well. There is no anticipated H2S, hydrocarbons, or odor.

**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: 1200

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

	Number of Tanks	Total Volume (bbls)
Oil	0	0
Condensate	0	0
Produced Water	0	0
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.

None

**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	S	No riparian corridor within 2640'
Wetland	2640	S	Not field delineated
Surface Waters of the State	2640	NW	Nearest feature is a field verified dry gully lacking an ordinary high water mark

**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	SE	There is no Public Water System intake within 5,280

**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	Percentage Recycled Water
Ground Water	100	Recycled Water (non-Produced Water)	0	Total Water Usage	100	0 %

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

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

Water from beneficial reuse is unavailable. There will be no hydraulic fracturing. Total water use is estimated to be limited to 4200 gallons because the well will be drilled with air.

**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
N/A	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.
Construction	1.1	0	
Post-interim Reclamation	0.2	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	0	Conservation Reserve Program(CRP)	0		
Non-Crop Land: Rangeland	2010	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.

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

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	1.1	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.

No adverse impacts. The area is rangeland previously disturbed from dirt roads, cattle grazing, and oil and gas development. After well development, the Working Pad Surface will be reduced to approximately 0.2 acres. Vegetation consists of blue grama, sideoats grama, western wheatgrass, Great Plains yucca, one-seed juniper, Plains prickly pear, and tree cholla.

**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
VT - Villedry-Travessilla complex, 1 to 8 percent slopes	0.55
DaE - Dalerose-Rock Outcrop complex, 3 to 25 percent slopes	0.55

**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.

None

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

None

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.

None

**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	0.28	0.26	0.02	0.002	0	43.2	0.0003
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	0	0	0	0	0	0	0
Process Heaters or Boilers	0	0	0	0	0	0	0
Storage Tanks	0	0	0	0	0	0	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	0	0	0	0	0	0
Fugitives			0	0	0	0	
Venting or Blowdowns	0	0	0	0	0	0	0
Combustion Control Devices	0	0	0	0	0	0	0
Loadout	0	0	0	0	0	0	0
Non-Road Internal Combustion Engines	0	0	0	0	0	0	0
Well Bradenhead	0	0	0	0	0	0	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:	159	During Completions:	318
During Drilling:	1272	During Interim Reclamation:	159
During Production:	1272		

**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	0.15	0.06	0	0.02	0	0	0	0.02	0	0.25
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	0	0	0	0	0	0	0	0	0	0
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
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	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
Loadout	0	0	0	0	0	0	0	0	0	0
Well Bradenhead	0	0	0	0	0	0	0	0	0	0
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.

No impact to public health. The nearest residential building unit is greater than 1 mile away. The internal combustion engine needed for well drilling will be needed for a short duration of 7 to 10 days.

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.

No impact to public health. The nearest residential building unit is greater than 1 mile away. The well is anticipated to produce helium without hydrocarbons, based on recent well information for this area.

**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	2	16	4	2	16
Annual	2	16	4	2	192

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.

N/A

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.

N/A

**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>2</u>	Active, built	<u>2</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>1</u>
Proposed	<u>1</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: 3.3

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:

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

	Permitted Onsite Storage Capacity	Existing Onsite Storage Capacity
Oil	<u>0</u>	<u>0</u>
Condensate	<u>0</u>	<u>0</u>
Produced Water	<u>0</u>	<u>0</u>
Pits	<u>0</u>	<u>0</u>

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.

High Priority Habitat (HPH) Name	Estimated Acreage Disturbed
None	0

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 OGDG:

	Construction		Post-interim Reclamation		
	Total Acreage (acres)	Total HPH Acreage (acres)	Total Acreage (acres)	Total HPH Acreage (acres)	
New roads, including access roads	0.37	0	New roads, including access roads	0.37	0
Pipelines	0.48	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 OGDG.

Number of miles of the existing lease road that are planned to be used to access these location(s): 1.2

**BENEFICIAL IMPACT INFORMATION**

**Equipment and Facility Removal**

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

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

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

Oil Tanks: 0

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

Condensate Tanks: 0

Produced Water Tanks: 0

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

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

Benefits from development of conventional vertical helium gas well locations include:

- (1) Lease income to the landowner
- (2) Tax revenue to Las Animas County
- (3) Contract work to local vendors
- (4) Development of a resource that historically has been in short supply to support uses in the medical, defense, aerospace, and commercial sectors

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

Development of inert helium gas using conventional vertical wells represents:

- (1) Development without hydrocarbons and associated potential water quality impacts
- (2) Minimal land use disturbance from an approximately 0.20-acre well pad after interim reclamation
- (3) Avoidance of habitat fragmentation from use of rangeland with existing road disturbances
- (4) Minimal noise from use of a small drill rig during a single drilling event greater than 1 mile from the nearest residential building unit
- (5) Avoidance of leaks and spills because no produced water, pits, or storage tanks on site
- (6) Avoidance of hydrocarbon air emissions because no equipment other than the wellhead during production

**MITIGATION INFORMATION**

Item	Impacted Resource	Mitigation Description
1	Air Resources	During production, there will be no supplied power or equipment other than the wellhead on the location.
2	Water Resources	No tanks, storage pits, or associated potential for spills will be on the location.
3	Soil Resources	Topsoil will be preserved to reduce the location to 0.20 acres after interim reclamation.

4	Public Welfare	There will be no noise, lighting, odor, or visual impacts based on the type of drilling equipment, daylight drilling, short drilling duration, and distance to the nearest residential building unit.
5	Ecosystem and Wildlife Resources	Existing roads minimize new disturbance to support access. The operator will install and utilize bear-proof dumpsters and trash receptacles for food-related trash at all facilities that generate trash.

**OPERATOR COMMENTS AND SUBMITTAL**

Desert Eagle Operating proposes to develop helium gas using a single exploratory conventional vertical helium gas well at each Oil and Gas Location. Each well will be drilled with air. There will be no drilling mud, hydraulic fracturing, stimulation, or flowback. The well is not expected to produce hydrocarbons or water, based on results from wells already drilled in this area. The location will be in a remote area on private ranchland. If the well is developed for production, the location will contain only a wellhead. Helium gas will be piped underground to an off-location helium processing unit. Compressed helium will be loaded onto a tube trailer for transport by truck.

Four new locations are being submitted as an amendment to the previously approved Red Rocks OGD. The previous Red Rocks Form 2B was Doc. No. 402674495. The 4 new locations bring the total number of locations under the Red Rocks OGD to 6, 2 existing and 4 new locations. The existing locations are:  
Red Rocks 1-13 (Location ID 481115)  
Red Rocks 35-15 (Location ID 481116)

Print Name: MARSHALL, WESLEY

Title: Principal

Email: wmarshall@prohelium.com

Date: 12/19/2022

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: 4/20/2023

## Attachment Check List

**Att Doc Num**      **Name**

403159619	Form 02B SUBMITTED
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Total Attach: 1 Files

### General Comments

<b>User Group</b>	<b>Comment</b>	<b>Comment Date</b>
OGLA	OGDP ID# 483775 and this Form are approved by Commission Order Number 572-2.	04/20/2023
OGLA	The Director has determined this OGDG application is complete. Form pushed to IN PROCESS.	01/31/2023
OGLA	Returned to DRAFT for the following reasons: Datafield issues	01/20/2023

Total: 3 comment(s)