FORM 2B Rev 03/21

State of Colorado
Oil and Gas Conservation Commission

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Document Number: 402653887

Date Received: 09/28/2021

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] **OGDP** [ ] **Partial 2B - Rule 803.b.(2).A UIC Conversion**

OPERATOR INFORMATION

OGCC Operator Number: 100322
Name of Operator: NOBLE ENERGY INC
Address: 1001 NOBLE ENERGY WAY
City: HOUSTON State: TX Zip: 77070

Contact Name and Telephone:
Name: Mosiah Montoya
Phone: (303) 249 2425
Email: mo.montoya@chevron.com

OIL & GAS DEVELOPMENT PLAN INFORMATION

Oil & Gas Development Plan Name: WR OGDP 1

Oil & Gas Development Plan Docket #:

Docket Number
210900156

Oil & Gas Development Plan ID #: Data not required

[ ] This OGDP is included in a Comprehensive Area Plan. CAP ID #:

OIL & GAS LOCATION DATA

1 Oil & Gas Location Name: A07-08 Number: Facility Status: Proposed

OIL & GAS LOCATION INFORMATION

Form 2A Doc#: 402118768
Loc ID#:
Oil & Gas Location: QTRQTR: SENE Sec: 7 Twp: 6N Rng: 64W Meridian: 6
Total number of wells planned: 0

Operations Duration

Estimated total number of weeks to construct this Oil & Gas Location: 9
Estimated total number of weeks to drill all planned wells for this Oil & Gas Location: 6
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: 5
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: 360

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.

• A baseline study will be conducted prior to commencement of construction and dirt work, which includes both A and C scale measurements.

• Noise Monitoring during Drilling and Completions: Upon commencement of drilling and/or completion activities, Operator will collect noise data to verify the predicted noise levels and ensure compliance with COGCC limits. If compliance is not confirmed, Operator will employ additional mitigation to ensure compliance with COGCC rules, such as exhaust mufflers or replacement of offending noisy equipment with quieter systems.

• Operator will conduct background ambient noise surveys to establish baseline conditions for noise levels on the site per 423.b.

• Construction: Mitigation measures will be completed prior to the commencement of the noise generating activity.

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

Vendor selected to construct noise barrier will consider landowner's suggestion for visually appealing finish on noise barrier.
• A modeling project will be conducted by a third-party vendor to determine noise levels stemming from the electric generators and natural gas compressors to ensure the permanent noise barrier is adequate or if additional noise-reduction baffling will be required.
• If available, will have compressor company(s) install noise reduction baffling equipment on identified pieces of equipment.
• Will keep work traffic to a minimum during daytime. If heavy trucks will be sent to location, drivers will be notified of the following rules:
o No Compression Release Engine Brake (aka Jake Brake) within 2500 feet of well pad
o No unnecessary revving of engine while on work site
o Nighttime operations will not be conducted, unless responding to an emergency.
• By committing improving its cumulative impact plan, Noble Energy will look at the following production improvements to reduce trips of heavy trucks to location:
o Reduce initial oil and water tanks on location
o Improve pipeline system

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.

• Operator will direct site lighting downward and inward, such that no light shines above a horizontal plane passing through the center point light source.• Operator will use appropriate technology within fixtures that obscures, blocks, or diffuses the light to reduce light intensity outside the boundaries of the Oil and Gas Facility.

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

Qualitative Evaluations – Lighting Impacts
• Operator will direct site lighting downward and inward, such that no light shines above a horizontal plane passing through the center point light source.
• Operator will use appropriate technology within fixtures that obscures, blocks, or diffuses the light to reduce light intensity outside the boundaries of the Oil and Gas Facility.
• Operator will minimize lighting when not needed using timers or motion sensors; to minimize light pollution and obtrusive lighting.
• Operator will use full cut-off lighting; to minimize light pollution and obtrusive lighting.
• Operator will use lighting colors that reduce light intensity by using neutral white and cool white color lights to minimize light pollution and obtrusive lighting.
• Operator will use low-glare or no-glare lighting to minimize light pollution and obtrusive lighting.
• When operator has active operations involving personnel ongoing at an oil and gas location, Operators will provide sufficient on-site pre-production lighting to ensure the safety of all persons on or near the site.
• Prior to the Commencement of Production Operations, Operators will take all necessary and reasonable precautions to ensure that lighting from Oil and Gas Facilities does not unnecessarily impact the health, safety, and welfare of Persons occupying the Residential Building Units (RBU). This includes:
o Normal production activities will be limited to times where optimal natural lighting be utilized. This includes scheduling operations from sunrise to sunset
o 10-25-foot light towers with timers set at 30-minute increments
o Use cool-white tempered glass light colors to reduce light intensity
o Combine high-mount/narrow-beam angle setting to reduce the glare effect of the light sources
• Prior to the Commencement of Production Operations, Operators will take all necessary and reasonable precautions to ensure that lighting from Oil and Gas Facilities does not unnecessarily impact the health, safety, and welfare of Motorists… within 2,000 feet of the Oil and Gas Facility. This includes:
o Adjusting lighting sources to point toward the facility
o Use cool, white-tempered glass light colors to reduce light intensity
• Prior to the Commencement of Production Operations, Operator will take all necessary and reasonable precautions to ensure that lighting from Oil and Gas Facilities does not unnecessarily impact the health, safety, and welfare of Wildlife occupying any High Priority Habitat within 2,000 feet of the Oil and Gas Facility. This includes:
o Identify permanent and temporary housing of resident wildlife and ensure locations are recorded in wildlife report kept in-house
o Ensure workday is limited to sunrise to sunset to avoid unnecessary nighttime lighting of nests and/or burrows
Conduct daily walkthrough of facility to ensure no wildlife have built nest(s) in/around lighting sources. If nest(s) found, report will be issued to appropriate personnel to either remove nest and/or temporarily abandon lighting source until nest is abandoned.

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 odor impacts are anticipated during pre-production activities. Drilling Operational leadership will partner with a member of the Health, Safety, and Environment department, a representative from Land Development, contract vendors, and an Occupational Health representative to discuss and identify any potential source of nuisance odor.

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

• Oil and gas facilities and equipment shall be operated in such a manner that odors do not constitute a nuisance or hazard to public welfare. Hydrocarbon odors from production facilities are minimized and eliminated by keeping produced fluid hydrocarbons and natural gas contained within pipes, separators, tanks, and combustors. All tanks will be sealed with thief hatches and gaskets. Tank vapors are captured with properly sized piping and combustors.
• Operator will conduct regular odor surveillance downwind at the perimeter of the property during drilling, well completion, or rework, repair, or maintenance.
• All facilities onsite shall be subjected to an instrument-based leak detection and repair (LDAR) inspection at least monthly during drilling and completion and quarterly during production. Volumetric Testing Involves measurement of liquid volume which must be added or removed from system to maintain constant pressure; volume changes indicate either leaks or thermal expansion/contraction of liquid.

WATER RESOURCES

[X] This Oil & Gas Location is listed as a sensitive area for water resources.

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

Estimated depth to groundwater: 28

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	1	300

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.

Maintenance Tank

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	N/A, >5,280' downstream along Willow Creek
Wetland	176	W	perennial ditch/channel wetland is Riverine, intermittent, streambed, seasonally flooded
Surface Waters of the State	75	W	irrigation pond

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	N/A, >5,280' and more than 15 stream miles downstream along Willow Creek

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	0 %
Ground Water	6000	Recycled Water (non-Produced Water)	0	Total Water Usage	0		

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

A limited amount of water will be needed during facility construction and will be provided by Triton Water Resources, LLC. No drilling or completions activities will occur at this location.

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

Recycle and reuse of produced water is not planned for the wells associated with this Pad. In accordance with Noble’s dedication to mitigating impacts to the environment, Noble will implement its best practices regarding the proper handling and disposal of E&P waste, including produced water. No drilling or completions activities will occur at this location.

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)
Construction	6.2	0
Post-interim Reclamation	6.2	0

Provide any further information regarding the location’s HPH disturbance.

Entire OGDP 1 is outside of HPH.

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	2438	Non-Irrigated	20	Conservation Reserve Program(CRP)	0		
Non-Crop Land:	Rangeland	80	Forestry	0	Recreation	0	Other	22
Subdivided:	Industrial	0	Commercial	22	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.

Sheep farm (pens)

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	6.2	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.

There will be minimal incremental adverse impacts to the ecosystems, including vegetative communities as a result of the proposed development, which is located entirely within cultivated cropland and existing oil and gas development areas.

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
4 Aquolls and Aquepts, flooded	1.3
38 Nelson fine sandy loam, 3 to 9 percent slopes	4.9

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 ResidentialBuilding Units:	6	21
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	0.004068698 4	0.02	0.14	0	0	8.17	1.317540276E-05
Non-Road Internal Combustion Engines	0	0	0	0	0	0	0
Drill Mud	4.956373596 83774E-17	2.259523257 38191E-16	5.80017772931 664E-16	6.880411345334 82E-16	3.26911940273 387E-16	8.83574193863 526E-14	1.60353263427 104E-19
Flowback or Completions	4.956373596 83774E-17	2.259523257 38191E-16	5.80017772931 664E-16	6.880411345334 82E-16	3.26911940273 387E-16	8.83574193863 526E-14	1.60353263427 104E-19
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	7.83	15.67	5.48	7.35	2.25	3514.34	0.01
Process Heaters or Boilers	11.59	9.74	0.64	0.26	0.36	13833.73	0.03
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			0.89	0.49	0.23	0.03	
Venting or Blowdowns	0	0	0	0	0	0	0
Combustion Control Devices	0.56	2.54	14.79	1.4	2.52	1072.69	0.00180126304578663
Loadout	0	0	0	0	0	0	0
Non-Road Internal Combustion Engines	3.42	6.83	2.39	3.21	0.98	1535.01	0.00307648283038502
Well Bradenhead	0.04	0.18	1.5	1.78	0.84	75.95	0.00013094044667114 4
Well Maintenance	0.04	0.18	1.5	1.78	0.84	75.95	0.00013094044667114 4

Diesel Vehicle Road Miles

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

During Construction: 1500 During Completions: 0

During Drilling: 0 During Interim Reclamation: 0

During Production: 23760

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	100.96	35.65	1.58	12.46	70.93	15.97	0	1309.89	195.53	1742.97
Process Heaters or Boilers	0.49	0.79	0	0	417.39	0	0	17.39	0	436.05
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	3.6	4.5	0.9	2.79	26.89	0.32	0	0	0	39
Venting or Blowdowns	0	0	0	0	0	0	0	0	0	0
Combustion Control Devices	185.3	150.94	108.39	68.44	988.87	105.49	0	2.36	0	1609.79
Non-Road Internal Combustion Engines	44.1	15.57	0.69	5.44	30.98	6.98	0	572.14	85.4	761.31
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.

Due to the modern flowback technology that will be employed for WR OGDP1 which eliminates uncontrolled emission flowback point sources, the emissions of HAP during pre-production activities will be zero. All sources of emissions during flowback (e.g., engines for completions equipment) will be located on the individual well pads and not on this production facility. Therefore, no incremental impacts to public health will result from pre-production activities.

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.

Noble Energy prepared a comprehensive Cumulative Impacts Plan for the entirety of the Wells Ranch CDP, and this plan has been submitted to the COGCC. Based on the review of specific hazardous pollutant emissions and other air emissions, as detailed in the Air Resources section of this Cumulative Impacts Plan, that will be eliminated as part of the plugging and removal process and the advanced design and technological enhancements employed for the proposed locations within the Wells Ranch CDP there should not be any chronic, short- or long-term incremental adverse impacts to Public Health. The emissions removed in conjunction with the removal of the Legacy Wells should have offsetting Public Health impacts to the proposed Wells Ranch CDP operations resulting in beneficial Cumulative Impacts and reducing negative Cumulative Impacts.

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

Total

Monthly

Annual	During Construction	During Drilling	During Completions	During Interim Reclamation	During Production
	1500	0	0	0	66
	1500	0	0	0	972

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.

No drilling or completions will occur at this location or proppant will be used at this location.

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.

No drilling or completions will occur at this location or proppant will be used at this location.

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	37	Active, built	37
Permitted by COGCC, unbuilt	4	Permitted by COGCC, unbuilt	32
Permitted by Relevant Local Government & not COGCC, unbuilt	0	Proposed	0
Proposed	0	Plugged and Abandoned	21

Total acreage disturbance during construction of the active and proposed oil & gas locations within 1-mile of the proposed Oil & Gas Location: 89

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.

COGIS

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	0	37
Condensate	0	0
Produced Water	0	0
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.

COGIS

2 Oil & Gas Location Name: A07-01 Number: Pad Status: Proposed

OIL & GAS LOCATION INFORMATION

Form 2A Doc#: 402118763

Loc ID#:

Oil & Gas Location: QTRQTR: NENE Sec: 7 Twp: 6N Rng: 64W Meridian: 6

Total number of wells planned: 16

Operations Duration

Estimated total number of weeks to construct this Oil & Gas Location: 9

Estimated total number of weeks to drill all planned wells for this Oil & Gas Location: 6

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: 5

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: 360

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.

• A baseline study will be conducted prior to commencement of construction and dirt work, which includes both A and C scale measurements.

• Noise Monitoring during Drilling and Completions: Upon commencement of drilling and/or completion activities, Operator will collect noise data to verify the predicted noise levels and ensure compliance with COGCC limits. If compliance is not confirmed, Operator will employ additional mitigation to ensure compliance with COGCC rules, such as exhaust mufflers or replacement of offending noisy equipment with quieter systems.

• Operator will take continuous sound measurements from each noise point of compliance designated pursuant to Rule 423.a.(5). during pre-production activities and ongoing operations lasting longer than 24 consecutive hours such as drilling, completion, recompletion, Stimulation, and Well maintenance, in areas zoned residential or within 2,000 feet of a Building Unit. If compliance is not confirmed, Operator will employ additional mitigation to ensure compliance with COGCC rules, such as hay bales, additional sound walls, or customized semi-trailers.

• Operator will conduct background ambient noise surveys to establish baseline conditions for noise levels on the site per 423.b.

• Construction: Mitigation measures will be completed prior to the commencement of the noise generating activity. Temporary barriers will be installed within the limits of construction as shown on the site plan for the project and will remain in place for the duration of the noise-generating activity on the site.

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

Vendor selected to construct noise barrier will consider landowner's suggestion for visually appealing finish on noise barrier.
• A modeling project will be conducted by a third-party vendor to determine noise levels stemming from the electric generators and natural gas compressors to ensure the temporary noise barrier is adequate or if additional noise-reduction baffling will be required.
• If available, will have compressor company(s) install noise reduction baffling equipment on identified pieces of equipment.
• Will keep work traffic to a minimum during daytime. If heavy trucks will be sent to location, drivers will be notified of the following rules:
o No Compression Release Engine Brake (aka Jake Brake) within 2500 feet of well pad
o No unnecessary revving of engine while on work site
o Nighttime operations will not be conducted, unless responding to an emergency.
• By committing improving its cumulative impact plan, Noble Energy will look at the following production improvements to reduce trips of heavy trucks to location:
o Reduce initial oil and water tanks on location
o Improve pipeline system

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.

• Operator will direct site lighting downward and inward, such that no light shines above a horizontal plane passing through the center point light source.• Operator will use appropriate technology within fixtures that obscures, blocks, or diffuses the light to reduce light intensity outside the boundaries of the Oil and Gas Facility. • Operator will locate lighting inside and beneath the 32' noise barrier at 25' and take precautions to ensure that lights do not shine outside of openings in the noise barrier.

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

Qualitative Evaluations – Lighting Impacts
• Operator will direct site lighting downward and inward, such that no light shines above a horizontal plane passing through the center point light source.
• Operator will use appropriate technology within fixtures that obscures, blocks, or diffuses the light to reduce light intensity outside the boundaries of the Oil and Gas Facility.
• Operator will minimize lighting when not needed using timers or motion sensors; to minimize light pollution and obtrusive lighting.
• Operator will use full cut-off lighting; to minimize light pollution and obtrusive lighting.
• Operator will use lighting colors that reduce light intensity by using neutral white and cool white color lights to minimize light pollution and obtrusive lighting.
• Operator will use low-glare or no-glare lighting to minimize light pollution and obtrusive lighting.
• When operator has active operations involving personnel ongoing at an oil and gas location, Operators will provide sufficient on-site pre-production lighting to ensure the safety of all persons on or near the site.
• Prior to the Commencement of Production Operations, Operators will take all necessary and reasonable precautions to ensure that lighting from Oil and Gas Facilities does not unnecessarily impact the health, safety, and welfare of Persons occupying the Residential Building Units (RBU). This includes:
o Normal production activities will be limited to times where optimal natural lighting be utilized. This includes scheduling operations from sunrise to sunset
o 10-25-foot light towers with timers set at 30-minute increments
o Use cool-white tempered glass light colors to reduce light intensity
o Combine high-mount/narrow-beam angle setting to reduce the glare effect of the light sources
• Prior to the Commencement of Production Operations, Operators will take all necessary and reasonable precautions to ensure that lighting from Oil and Gas Facilities does not unnecessarily impact the health, safety, and welfare of Motorists… within 2,000 feet of the Oil and Gas Facility. This includes:
o Adjusting lighting sources to point toward the facility
o Use cool, white-tempered glass light colors to reduce light intensity
• Prior to the Commencement of Production Operations, Operator will take all necessary and reasonable precautions to ensure that lighting from Oil and Gas Facilities does not unnecessarily impact the health, safety, and welfare of Wildlife occupying any High Priority Habitat within 2,000 feet of the Oil and Gas Facility. This includes:
o Identify permanent and temporary housing of resident wildlife and ensure locations are recorded in wildlife report kept in-house
o Ensure workday is limited to sunrise to sunset to avoid unnecessary nighttime lighting of nests and/or burrows
Conduct daily walkthrough of facility to ensure no wildlife have built nest(s) in/around lighting sources. If nest(s) found, report will be issued to appropriate personnel to either remove nest and/or temporarily abandon lighting source until nest is abandoned.

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 Operational leadership will partner with a member of the Health, Safety, and Environment department, a representative from Land Development, contract vendor supplying odor-reducing chemical, and an Occupational Health representative to discuss use of odor-reducing chemical to reduce odor in the drilling shavings, oil-based mud, and/or other sources identified as causing nuisance odor.
• Drilling operations will utilize Benzaco drilling fluid: Odor Armor (Oil-based)/Group III/Aromatic Content 1.20%
• Drilling operations will keep a copy of the Safety Data Sheet (SDS) readily available for review, as described in OSHA Standard 29 CFR 1910.1200 (Hazard Communication) as well as local and state guidelines.

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

• An alternative base fluid will be used for the oil-based mud in a designated setback location. This base fluid has lower BTEX levels, is considered Non-Flammable and Combustible by OSHA/WHMIS criteria and is classified as a non-regulated material by the US DOT. More importantly, this alternative base fluid has a higher flash point than normal diesel base fluid, which limits the odor causing vapor associated with OBM.
• Oil and gas facilities and equipment shall be operated in such a manner that odors do not constitute a nuisance or hazard to public welfare. Operator will utilize advanced oil-based mud systems which target the reduction of aromatics. Hydrocarbon odors from production facilities are minimized and eliminated by keeping produced fluid hydrocarbons and natural gas contained within pipes, separators, tanks, and combustors. All tanks will be sealed with thief hatches and gaskets. Tank vapors are captured with properly sized piping and combustors.
• Operator will conduct regular odor surveillance downwind at the perimeter of the property during drilling, well completion, or rework, repair, or maintenance.
• All facilities onsite shall be subjected to an instrument-based leak detection and repair (LDAR) inspection at least monthly during drilling and completion and quarterly during production. Volumetric Testing Involves measurement of liquid volume which must be added or removed from system to maintain constant pressure; volume changes indicate either leaks or thermal expansion/contraction of liquid.

WATER RESOURCES

[X] This Oil & Gas Location is listed as a sensitive area for water resources.

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

Estimated depth to groundwater:

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.

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	SW	N/A
Wetland	746	W	Permanently flooded riverine wetland described as edge of Willow Creek
Surface Waters of the State	77	N	ditch is dry at time of observation

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	S	N/A

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	8743750	Recycled Water (Produced Water)	0	Unspecified Source	4000	Percentage Recycled Water	0 %
Ground Water	993750	Recycled Water (non-Produced Water)	0	Total Water Usage	974150 0		

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

City of Greeley will provide water from Hydrants from unspecified surface and groundwater sources.

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

Recycle and reuse of produced water is not planned for the wells associated with this Pad. In accordance with Noble’s dedication to mitigating impacts to the environment, Noble will implement its best practices regarding the proper handling and disposal of E&P waste, including produced 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.

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)
Construction	13	0
Post-interim Reclamation	5.9	0

Provide any further information regarding the location's HPH disturbance.

N/A; No part of WR OGDP 1 is within HPH.

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	1935	Non-Irrigated	20	Conservation Reserve Program(CRP)	0		
Non-Crop Land:	Rangeland	34	Forestry	0	Recreation	0	Other	22
Subdivided:	Industrial	0	Commercial	32	Residential	6		

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.

Sheep farm

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	13	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.

There will be minimal incremental adverse impacts to the ecosystems, including vegetative communities as a result of the proposed development, which is located entirely within cultivated cropland and existing oil and gas development areas.

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
51- Otero sandy loam, 1% - 3% slopes	0.9
37 - Nelson fine sandy loam, 0% - 3% slopes	8.9
52 - Otero sandy loam, 3%-5% slopes	3.2

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 ResidentialBuilding Units:	13	27
Total Number of non-school AND non child care center High Occupancy Building Units:	0	3
Total number of School Facilities:	0	3
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	0.004068698 4	0.018548478	0.13613984168 8654	0	0	8.16839050131926	1.317540276E-05
Non-Road Internal Combustion Engines	92.65115797 41831	84.36279856 11922	92.6511579741831	41.5160 7249745 12	3.48735008978 59	11708.0156987029	0.07246206353 19283
Drill Mud	0.198251184 85367 3	0.903792166 24468 4	2.31986986102276	2.75218 8023276 6	1.30765005956098	353.417311911595	0.00064140089 217364 7
Flowback or Completions	0.158600947 88293 8	0.723033732 99574 7	1.85589588881821	2.20175 0418621 28	1.04612004764878	282.733849529276	0.00051312071 373891 7
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	2.80089632554781	3.3228559287432	1.57879211608534	0.206033537474563	0
Separators	0	0	0	0	0	0	0
Fugitives			0.08191426519 70508	0.097179 3562210 579	0.04617293218 18912	0.00602560175977844	
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: 1500 During Completions: 3442

During Drilling: 3760 During Interim Reclamation: 800

During Production: 23760

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	120.97	67.21	2.62	40.22	73.15	16.48	0	3596.06	164.76	4081.46
Drill Mud	20.16	25.24	5.03	15.66	150.73	1.81	0.11	0.84	0	219.48
Flowback or Completions	16.13	20.19	4.03	12.53	120.58	1.44	0.09	0.67	0	175.58
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	24.35	30.48	6.08	18.91	181.98	2.18	0.13	0	0	263.97
Separators	0	0	0	0	0	0	0	0	0	0
Fugitives	0.71	0.89	0.18	0.55	5.32	0.06	0	0	0	7.72
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.

Due to the modern flowback technology that will be employed for WR OGDP1 which eliminates uncontrolled emission flowback point sources, the emissions of HAP during pre-production activities will be predominately those that come from engines powering completions equipment. Therefore, no incremental impacts to public health will result from pre-production activities outside of the well pad.

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.

Noble Energy prepared a comprehensive Cumulative Impacts Plan for the entirety of the Wells Ranch CDP, and this plan has been submitted to the COGCC. Based on the review of specific hazardous pollutant emissions and other air emissions, as detailed in the Air Resources section of this Cumulative Impacts Plan, that will be eliminated as part of the plugging and removal process and the advanced design and technological enhancements employed for the proposed locations within the Wells Ranch CDP there should not be any chronic, short- or long-term incremental adverse impacts to Public Health. The emissions removed in conjunction with the removal of the Legacy Wells should have offsetting Public Health impacts to the proposed Wells Ranch CDP operations resulting in beneficial Cumulative Impacts and reducing negative Cumulative Impacts.

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	1500	1920	2408	1500	66
Annual	1500	1920	2408	1500	972

Estimated total pounds (lbs) of proppant to be used during completions activities. 7200000
0

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

The two types of proppants utilized during completion activities will be 40/70 and 100 mesh.

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.

We currently use a self-contained proppant storage system that is gravity fed eliminating silica dust leaving location while meeting OSHA requirements inside the boundaries of location.

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	42	Active, built	42
Permitted by COGCC, unbuilt	6	Permitted by COGCC, unbuilt	42
Permitted by Relevant Local Government & not COGCC, unbuilt	0	Proposed	0
Proposed	0	Plugged and Abandoned	13

Total acreage disturbance during construction of the active and proposed oil & gas locations within 1-mile of the proposed Oil & Gas Location: 108

Source for acreage total:

- [ ] Field Observation/Measurement
- [X] COGCC Location Files
- [ ] Aerial PhotosOther
- [X] 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.

COGIS

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
- [X] COGCC Location Files
- [ ] Aerial PhotosOther
- [X] Other

	Permitted Onsite Storage Capacity	Existing Onsite Storage Capacity
Oil	0	42
Condensate	0	0
Produced Water	0	0
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.

COGIS

3 Oil & Gas Location Name: A07-04 Number: Pad Status: Proposed

OIL & GAS LOCATION INFORMATION

Form 2A Doc#: 402121126

Loc ID#:

Oil & Gas Location: QTRQTR: Lot 1 Sec: 7 Twp: 6N Rng: 64W Meridian: 6

Total number of wells planned: 8

Operations Duration

Estimated total number of weeks to construct this Oil & Gas Location: 9

Estimated total number of weeks to drill all planned wells for this Oil & Gas Location: 6

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: 5

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: 360

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.

• A baseline study will be conducted prior to commencement of construction and dirt work, which includes both A and C scale measurements.

• Noise Monitoring during Drilling and Completions: Upon commencement of drilling and/or completion activities, Operator will collect noise data to verify the predicted noise levels and ensure compliance with COGCC limits. If compliance is not confirmed, Operator will employ additional mitigation to ensure compliance with COGCC rules, such as exhaust mufflers or replacement of offending noisy equipment with quieter systems.

• Operator will take continuous sound measurements from each noise point of compliance designated pursuant to Rule 423.a.(5). during pre-production activities and ongoing operations lasting longer than 24 consecutive hours such as drilling, completion, recompletion, Stimulation, and Well maintenance, in areas zoned residential or within 2,000 feet of a Building Unit. If compliance is not confirmed, Operator will employ additional mitigation to ensure compliance with COGCC rules, such as hay bales, additional sound walls, or customized semi-trailers.

• Operator will conduct background ambient noise surveys to establish baseline conditions for noise levels on the site per 423.b.

• Construction: Mitigation measures will be completed prior to the commencement of the noise generating activity. Temporary barriers will be installed within the limits of construction as shown on the site plan for the project and will remain in place for the duration of the noise-generating activity on the site.

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

Vendor selected to construct noise barrier will consider landowner's suggestion for visually appealing finish on noise barrier.
• A modeling project will be conducted by a third-party vendor to determine noise levels stemming from the electric generators and natural gas compressors to ensure the temporary noise barrier is adequate or if additional noise-reduction baffling will be required.
• If available, will have compressor company(s) install noise reduction baffling equipment on identified pieces of equipment.
• Will keep work traffic to a minimum during daytime. If heavy trucks will be sent to location, drivers will be notified of the following rules:
o No Compression Release Engine Brake (aka Jake Brake) within 2500 feet of well pad
o No unnecessary revving of engine while on work site
o Nighttime operations will not be conducted, unless responding to an emergency.
• By committing improving its cumulative impact plan, Noble Energy will look at the following production improvements to reduce trips of heavy trucks to location:
o Reduce initial oil and water tanks on location
o Improve pipeline system

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.

• Operator will direct site lighting downward and inward, such that no light shines above a horizontal plane passing through the center point light source.• Operator will use appropriate technology within fixtures that obscures, blocks, or diffuses the light to reduce light intensity outside the boundaries of the Oil and Gas Facility. • Operator will locate lighting inside and beneath the 32' noise barrier at 25' and take precautions to ensure that lights do not shine outside of openings in the noise barrier.

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

Qualitative Evaluations – Lighting Impacts
• Operator will direct site lighting downward and inward, such that no light shines above a horizontal plane passing through the center point light source.
• Operator will use appropriate technology within fixtures that obscures, blocks, or diffuses the light to reduce light intensity outside the boundaries of the Oil and Gas Facility.
• Operator will minimize lighting when not needed using timers or motion sensors; to minimize light pollution and obtrusive lighting.
• Operator will use full cut-off lighting; to minimize light pollution and obtrusive lighting.
• Operator will use lighting colors that reduce light intensity by using neutral white and cool white color lights to minimize light pollution and obtrusive lighting.
• Operator will use low-glare or no-glare lighting to minimize light pollution and obtrusive lighting.
• When operator has active operations involving personnel ongoing at an oil and gas location, Operators will provide sufficient on-site pre-production lighting to ensure the safety of all persons on or near the site.
• Prior to the Commencement of Production Operations, Operators will take all necessary and reasonable precautions to ensure that lighting from Oil and Gas Facilities does not unnecessarily impact the health, safety, and welfare of Persons occupying the Residential Building Units (RBU). This includes:
o Normal production activities will be limited to times where optimal natural lighting be utilized. This includes scheduling operations from sunrise to sunset
o 10-25-foot light towers with timers set at 30-minute increments
o Use cool-white tempered glass light colors to reduce light intensity
o Combine high-mount/narrow-beam angle setting to reduce the glare effect of the light sources
• Prior to the Commencement of Production Operations, Operators will take all necessary and reasonable precautions to ensure that lighting from Oil and Gas Facilities does not unnecessarily impact the health, safety, and welfare of Motorists within 2,000 feet of the Oil and Gas Facility. This includes:
o Adjusting lighting sources to point toward the facility
o Use cool, white-tempered glass light colors to reduce light intensity
• Prior to the Commencement of Production Operations, Operator will take all necessary and reasonable precautions to ensure that lighting from Oil and Gas Facilities does not unnecessarily impact the health, safety, and welfare of Wildlife occupying any High Priority Habitat within 2,000 feet of the Oil and Gas Facility. This includes:
o Identify permanent and temporary housing of resident wildlife and ensure locations are recorded in wildlife report kept in-house
o Ensure workday is limited to sunrise to sunset to avoid unnecessary nighttime lighting of nests and/or burrows
Conduct daily walkthrough of facility to ensure no wildlife have built nest(s) in/around lighting sources. If nest(s) found, report will be issued to appropriate personnel to either remove nest and/or temporarily abandon lighting source until nest is abandoned.

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 Operational leadership will partner with a member of the Health, Safety, and Environment department, a representative from Land Development, contract vendor supplying odor-reducing chemical, and an Occupational Health representative to discuss use of odor-reducing chemical to reduce odor in the drilling shavings, oil-based mud, and/or other sources identified as causing nuisance odor.
• Drilling operations will utilize Benzaco drilling fluid: Odor Armor (Oil-based)/Group III/Aromatic Content 1.20%
• Drilling operations will keep a copy of the Safety Data Sheet (SDS) readily available for review, as described in OSHA Standard 29 CFR 1910.1200 (Hazard Communication) as well as local and state guidelines.

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

• An alternative base fluid will be used for the oil-based mud in a designated setback location. This base fluid has lower BTEX levels, is considered Non-Flammable and Combustible by OSHA/WHMIS criteria and is classified as a non-regulated material by the US DOT. More importantly, this alternative base fluid has a higher flash point than normal diesel base fluid, which limits the odor causing vapor associated with OBM.
• Oil and gas facilities and equipment shall be operated in such a manner that odors do not constitute a nuisance or hazard to public welfare. Operator will utilize advanced oil-based mud systems which target the reduction of aromatics. Hydrocarbon odors from production facilities are minimized and eliminated by keeping produced fluid hydrocarbons and natural gas contained within pipes, separators, tanks, and combustors. All tanks will be sealed with thief hatches and gaskets. Tank vapors are captured with properly sized piping and combustors.
• Operator will conduct regular odor surveillance downwind at the perimeter of the property during drilling, well completion, or rework, repair, or maintenance.
• All facilities onsite shall be subjected to an instrument-based leak detection and repair (LDAR) inspection at least monthly during drilling and completion and quarterly during production. Volumetric Testing Involves measurement of liquid volume which must be added or removed from system to maintain constant pressure; volume changes indicate either leaks or thermal expansion/contraction of liquid.

WATER RESOURCES

[X] This Oil & Gas Location is listed as a sensitive area for water resources.

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

Estimated depth to groundwater: 29

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.

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	SE	Riparian area is Rp1FO shrub area along edge of Willow Creek
Wetland	132	SE	SEASONAL INTERMITTENT STREAMBED WETLAND
Surface Waters of the State	89	W	Roadside ditch along east side of WCR 49 is dry at time of observation

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	S	N/A

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	4266900	Recycled Water (Produced Water)	0	Unspecified Source	6300	0 %

Ground Water	Recycled Water (non-Produced Water)	Total Water Usage	Percentage Recycled Water
492780	0	476598	0

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

City of Greeley will provide water from Hydrants from unspecified surface and groundwater sources.

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

Recycle and reuse of produced water is not planned for the wells associated with this Pad. In accordance with Noble's dedication to mitigating impacts to the environment, Noble will implement its best practices regarding the proper handling and disposal of E&P waste, including produced 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.

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)
Construction	10.4	0
Post-interim Reclamation	2.2	0

Provide any further information regarding the location's HPH disturbance.

N/A; No part of WR OGDP 1 is within HPH.

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	2160	Non-Irrigated	0	Conservation Reserve Program(CRP)	0		
Non-Crop Land:	Rangeland	60	Forestry	0	Recreation	0	Other	222
Subdivided:	Industrial		Commercial	228	Residential	10		

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.

Dairy farm, sheep farm

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	10.4	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.

There will be minimal incremental adverse impacts to the ecosystems, including vegetative communities as a result of the proposed development, which is located entirely within cultivated cropland and existing oil and gas development areas.

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
32 - Kim loam, 1%-3% slopes	3.6
47 - Olney fine sandy loam, 1%-3% slopes	6.8

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 ResidentialBuilding Units:	6	25
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	0.004068684	0.02	0.14	0	0	8.17	1.317540276E-05
Non-Road Internal Combustion Engines	46.33	42.18	46.33	20.76	1.74	5854.01	0.04
Drill Mud	0.1	0.45	1.16	1.38	0.65	176.71	0.000320700446086823
Flowback or Completions	0.08	0.36	0.93	1.1	0.52	141.37	0.000256560356869459
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	1.4	1.66	0.79	0.1	0
Separators	0	0	0	0	0	0	0
Fugitives			0.04	0.05	0.02	0.00301280087988922	
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: 1500 During Completions: 3442

During Drilling: 3760 During Interim Reclamation: 800

During Production: 23760

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	60.48	33.6	1.31	20.11	36.58	8.24	0	1798.03	82.38	2040.73
Drill Mud	10.08	12.62	2.52	7.83	75.36	0.9	0.05	0.42	0	109.74
Flowback or Completions	8.07	10.1	2.01	6.26	60.29	0.72	0.04	0.34	0	87.79
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	12.17	15.24	3.04	9.45	90.99	1.09	0.07	0	0	131.99
Separators	0	0	0	0	0	0	0	0	0	0
Fugitives	0.36	0.45	0.09	0.28	2.66	0.03	0	0	0	3.86
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.

Due to the modern flowback technology that will be employed for WR OGDP1 which eliminates uncontrolled emission flowback point sources, the emissions of HAP during pre-production activities will be predominately those that come from engines powering completions equipment. Therefore, no incremental impacts to public health will result from pre-production activities outside of the well pad.

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.

Noble Energy prepared a comprehensive Cumulative Impacts Plan for the entirety of the Wells Ranch CDP, and this plan has been submitted to the COGCC. Based on the review of specific hazardous pollutant emissions and other air emissions, as detailed in the Air Resources section of this Cumulative Impacts Plan, that will be eliminated as part of the plugging and removal process and the advanced design and technological enhancements employed for the proposed locations within the Wells Ranch CDP there should not be any chronic, short- or long-term incremental adverse impacts to Public Health. The emissions removed in conjunction with the removal of the Legacy Wells should have offsetting Public Health impacts to the proposed Wells Ranch CDP operations resulting in beneficial Cumulative Impacts and reducing negative Cumulative Impacts.

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	1500	1920	2408	1500	66
Annual	1500	1920	2408	1500	972

Estimated total pounds (lbs) of proppant to be used during completions activities. 72000000

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

The two types of proppants utilized during completion activities will be 40/70 and 100 mesh.

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.

We currently use a self-contained proppant storage system that is gravity fed eliminating silica dust leaving location while meeting OSHA requirements inside the boundaries of location.

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	34	Active, built	39
Permitted by COGCC, unbuilt	7	Permitted by COGCC, unbuilt	42
Permitted by Relevant Local Government & not COGCC, unbuilt	0	Proposed	0
Proposed	0	Plugged and Abandoned	13

Total acreage disturbance during construction of the active and proposed oil & gas locations within 1-mile of the proposed Oil & Gas Location: 109

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.

COGIS

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
☐ Field Observation/Measurement	Oil	0	39
☒ COGCC Location Files	Condensate	0	0
☐ Aerial PhotosOther	Produced Water	0	0
☒ 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.

COGIS

4 Oil & Gas Location Name: A07-23 Number: Pad Status: Proposed

OIL & GAS LOCATION INFORMATION

Form 2A Doc#: 402118769

Loc ID#:

Oil & Gas Location: QTRQTR: NESE Sec: 7 Twp: 6N Rng: 64W Meridian: 6

Total number of wells planned: 4

Operations Duration

Estimated total number of weeks to construct this Oil & Gas Location: 9

Estimated total number of weeks to drill all planned wells for this Oil & Gas Location: 6

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: 5

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: 360

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.

• A baseline study will be conducted prior to commencement of construction and dirt work, which includes both A and C scale measurements.

• Noise Monitoring during Drilling and Completions: Upon commencement of drilling and/or completion activities, Operator will collect noise data to verify the predicted noise levels and ensure compliance with COGCC limits. If compliance is not confirmed, Operator will employ additional mitigation to ensure compliance with COGCC rules, such as exhaust mufflers or replacement of offending noisy equipment with quieter systems.

• Operator will take continuous sound measurements from each noise point of compliance designated pursuant to Rule 423.a.(5). during pre-production activities and ongoing operations lasting longer than 24 consecutive hours such as drilling, completion, recompletion, Stimulation, and Well maintenance, in areas zoned residential or within 2,000 feet of a Building Unit. If compliance is not confirmed, Operator will employ additional mitigation to ensure compliance with COGCC rules, such as hay bales, additional sound walls, or customized semi-trailers.

• Operator will conduct background ambient noise surveys to establish baseline conditions for noise levels on the site per 423.b.

• Construction: Mitigation measures will be completed prior to the commencement of the noise generating activity. Temporary barriers will be installed within the limits of construction as shown on the site plan for the project and will remain in place for the duration of the noise-generating activity on the site.

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

Vendor selected to construct noise barrier will consider landowner's suggestion for visually appealing finish on noise barrier.
• A modeling project will be conducted by a third-party vendor to determine noise levels stemming from the electric generators and natural gas compressors to ensure the temporary noise barrier is adequate or if additional noise-reduction baffling will be required.
• If available, will have compressor company(s) install noise reduction baffling equipment on identified pieces of equipment.
• Will keep work traffic to a minimum during daytime. If heavy trucks will be sent to location, drivers will be notified of the following rules:
o No Compression Release Engine Brake (aka Jake Brake) within 2500 feet of well pad
o No unnecessary revving of engine while on work site
o Nighttime operations will not be conducted, unless responding to an emergency.
• By committing improving its cumulative impact plan, Noble Energy will look at the following production improvements to reduce trips of heavy trucks to location:
o Reduce initial oil and water tanks on location
o Improve pipeline system

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.

• Operator will direct site lighting downward and inward, such that no light shines above a horizontal plane passing through the center point light source.• Operator will use appropriate technology within fixtures that obscures, blocks, or diffuses the light to reduce light intensity outside the boundaries of the Oil and Gas Facility. • Operator will locate lighting inside and beneath the 32' noise barrier at 25' and take precautions to ensure that lights do not shine outside of openings in the noise barrier.

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

Qualitative Evaluations – Lighting Impacts
• Operator will direct site lighting downward and inward, such that no light shines above a horizontal plane passing through the center point light source.
• Operator will use appropriate technology within fixtures that obscures, blocks, or diffuses the light to reduce light intensity outside the boundaries of the Oil and Gas Facility.
• Operator will minimize lighting when not needed using timers or motion sensors; to minimize light pollution and obtrusive lighting.
• Operator will use full cut-off lighting; to minimize light pollution and obtrusive lighting.
• Operator will use lighting colors that reduce light intensity by using neutral white and cool white color lights to minimize light pollution and obtrusive lighting.
• Operator will use low-glare or no-glare lighting to minimize light pollution and obtrusive lighting.
• When operator has active operations involving personnel ongoing at an oil and gas location, Operators will provide sufficient on-site pre-production lighting to ensure the safety of all persons on or near the site.
• Prior to the Commencement of Production Operations, Operators will take all necessary and reasonable precautions to ensure that lighting from Oil and Gas Facilities does not unnecessarily impact the health, safety, and welfare of Persons occupying the Residential Building Units (RBU). This includes:
o Normal production activities will be limited to times where optimal natural lighting be utilized. This includes scheduling operations from sunrise to sunset
o 10-25-foot light towers with timers set at 30-minute increments
o Use cool-white tempered glass light colors to reduce light intensity
o Combine high-mount/narrow-beam angle setting to reduce the glare effect of the light sources
• Prior to the Commencement of Production Operations, Operators will take all necessary and reasonable precautions to ensure that lighting from Oil and Gas Facilities does not unnecessarily impact the health, safety, and welfare of Motorists… within 2,000 feet of the Oil and Gas Facility. This includes:
o Adjusting lighting sources to point toward the facility
o Use cool, white-tempered glass light colors to reduce light intensity
• Prior to the Commencement of Production Operations, Operator will take all necessary and reasonable precautions to ensure that lighting from Oil and Gas Facilities does not unnecessarily impact the health, safety, and welfare of Wildlife occupying any High Priority Habitat within 2,000 feet of the Oil and Gas Facility. This includes:
o Identify permanent and temporary housing of resident wildlife and ensure locations are recorded in wildlife report kept in-house
o Ensure workday is limited to sunrise to sunset to avoid unnecessary nighttime lighting of nests and/or burrows
Conduct daily walkthrough of facility to ensure no wildlife have built nest(s) in/around lighting sources. If nest(s) found, report will be issued to appropriate personnel to either remove nest and/or temporarily abandon lighting source until nest is abandoned.

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 Operational leadership will partner with a member of the Health, Safety, and Environment department, a representative from Land Development, contract vendor supplying odor-reducing chemical, and an Occupational Health representative to discuss use of odor-reducing chemical to reduce odor in the drilling shavings, oil-based mud, and/or other sources identified as causing nuisance odor.
• Drilling operations will utilize Benzaco drilling fluid: Odor Armor (Oil-based)/Group III/Aromatic Content 1.20%
• Drilling operations will keep a copy of the Safety Data Sheet (SDS) readily available for review, as described in OSHA Standard 29 CFR 1910.1200 (Hazard Communication) as well as local and state guidelines.

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

• An alternative base fluid will be used for the oil-based mud in a designated setback location. This base fluid has lower BTEX levels, is considered Non-Flammable and Combustible by OSHA/WHMIS criteria and is classified as a non-regulated material by the US DOT. More importantly, this alternative base fluid has a higher flash point than normal diesel base fluid, which limits the odor causing vapor associated with OBM.
• Oil and gas facilities and equipment shall be operated in such a manner that odors do not constitute a nuisance or hazard to public welfare. Operator will utilize advanced oil-based mud systems which target the reduction of aromatics. Hydrocarbon odors from production facilities are minimized and eliminated by keeping produced fluid hydrocarbons and natural gas contained within pipes, separators, tanks, and combustors. All tanks will be sealed with thief hatches and gaskets. Tank vapors are captured with properly sized piping and combustors.
• Operator will conduct regular odor surveillance downwind at the perimeter of the property during drilling, well completion, or rework, repair, or maintenance.
• All facilities onsite shall be subjected to an instrument-based leak detection and repair (LDAR) inspection at least monthly during drilling and completion and quarterly during production. Volumetric Testing Involves measurement of liquid volume which must be added or removed from system to maintain constant pressure; volume changes indicate either leaks or thermal expansion/contraction of liquid.

WATER RESOURCES

[X] This Oil & Gas Location is listed as a sensitive area for water resources.

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

Estimated depth to groundwater: 28

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.

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	S	Riparian area is Rp2SS shrub area along edge of Greeley Number 2 Canal
Wetland	120	W	Mapped Freshwater Emergent Wetland along Greeley Number 2 Canal
Surface Waters of the State	256	W	Greeley Number 2 Canal

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	S	N/A

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	2172240	Recycled Water (Produced Water)	0	Unspecified Source	3600	Percentage Recycled Water	0 %
Ground Water	247040	Recycled Water (non-Produced Water)	0	Total Water Usage	242288 0		

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

City of Greeley will provide water from Hydrants from unspecified surface and groundwater sources.

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

Recycle and reuse of produced water is not planned for the wells associated with this Pad. In accordance with Noble's dedication to mitigating impacts to the environment, Noble will implement its best practices regarding the proper handling and disposal of E&P waste, including produced 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	4752	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)
Construction	8.4	0
Post-interim Reclamation	2	0

Provide any further information regarding the location's HPH disturbance.

N/A; No part of WR OGDP 1 is within HPH.

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	2306	Non-Irrigated	0	Conservation Reserve Program(CRP)	0		
Non-Crop Land:	Rangeland	232	Forestry	0	Recreation	0	Other	22
Subdivided:	Industrial	0	Commercial	22	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.

sheep farm

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	8.4	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.

There will be minimal incremental adverse impacts to the ecosystems, including vegetative communities as a result of the proposed development, which is located entirely within cultivated cropland and existing oil and gas development areas.

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
52 - Otero sandy loam, 3% - 5% slopes	8.3
37 - Nelson fine sandy loam, 0% - 3% slopes	0.1

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 ResidentialBuilding Units:	6	24
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	0.004068698	0.02	0.14	0	0	8.17	1.317540276E-05
Non-Road Internal Combustion Engines	23.16	21.09	23.16	10.38	0.87	2927	0.02
Drill Mud	0.05	0.23	0.58	0.69	0.33	88.35	0.000160350223043412
Flowback or Completions	0.04	0.18	0.46	0.55	0.26	70.68	0.000128280178434729
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	0.7	0.83	0.39	0.05	0
Separators	0	0	0	0	0	0	0
Fugitives			0.02	0.02	0.01	0.00150640043994461	
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: 1500 During Completions: 3442

During Drilling: 3760 During Interim Reclamation: 800

During Production: 23760

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	30.24	16.8	0.65	10.06	18.29	4.12	0	899.01	41.19	1020.37
Drill Mud	5.04	6.31	1.26	3.92	37.68	0.45	0.03	0.21	0	54.87
Flowback or Completions	4.03	5.05	1.01	3.13	30.15	0.36	0.02	0.17	0	43.9
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	6.09	7.62	1.52	4.73	45.5	0.54	0.03	0	0	65.99
Separators	0	0	0	0	0	0	0	0	0	0

Fugitives	0.18	0.22	0.04	0.14	1.33	0.02	0	0	0	1.93
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.

Due to the modern flowback technology that will be employed for WR OGDP1 which eliminates uncontrolled emission flowback point sources, the emissions of HAP during pre-production activities will be predominately those that come from engines powering completions equipment. Therefore, no incremental impacts to public health will result from pre-production activities outside of the well pad.

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.

Noble Energy prepared a comprehensive Cumulative Impacts Plan for the entirety of the Wells Ranch CDP, and this plan has been submitted to the COGCC. Based on the review of specific hazardous pollutant emissions and other air emissions, as detailed in the Air Resources section of this Cumulative Impacts Plan, that will be eliminated as part of the plugging and removal process and the advanced design and technological enhancements employed for the proposed locations within the Wells Ranch CDP there should not be any chronic, short- or long-term incremental adverse impacts to Public Health. The emissions removed in conjunction with the removal of the Legacy Wells should have offsetting Public Health impacts to the proposed Wells Ranch CDP operations resulting in beneficial Cumulative Impacts and reducing negative Cumulative Impacts.

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	1500	1920	2408	1500	66
Annual	1500	1920	2408	1500	972

Estimated total pounds (lbs) of proppant to be used during completions activities. 7200000
0

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

The two types of proppants utilized during completion activities will be 40/70 and 100 mesh.

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.

We currently use a self-contained proppant storage system that is gravity fed eliminating silica dust leaving location while meeting OSHA requirements inside the boundaries of location.

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	33	Active, built	33
Permitted by COGCC, unbuilt	5	Permitted by COGCC, unbuilt	37
Permitted by Relevant Local Government & not COGCC, unbuilt	0	Proposed	0
Proposed	0	Plugged and Abandoned	23

Total acreage disturbance during construction of the active and proposed oil & gas locations within 1-mile of the proposed Oil & Gas Location: 99

Source for acreage total:

☐ Field Observation/Measurement

☒ COGCC Location Files

☐ Aerial PhotosOther

[X] 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.

COGIS

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
- [X] COGCC Location Files
- [ ] Aerial PhotosOther
- [X] Other

	Permitted Onsite Storage Capacity	Existing Onsite Storage Capacity
Oil	0	33
Condensate	0	0
Produced Water	0	0
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.

COGIS

5 Oil & Gas Location Name: A18-09 Number: Pad Status: Proposed

OIL & GAS LOCATION INFORMATION

Form 2A Doc#: 402099017

Loc ID#:

Oil & Gas Location: QTRQTR: NESE Sec: 18 Twp: 6N Rng: 64W Meridian: 6

Total number of wells planned: 8

Operations Duration

Estimated total number of weeks to construct this Oil & Gas Location: 9

Estimated total number of weeks to drill all planned wells for this Oil & Gas Location: 6

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: 5

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: 360

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.

• A baseline study will be conducted prior to commencement of construction and dirt work, which includes both A and C scale measurements.

• Noise Monitoring during Drilling and Completions: Upon commencement of drilling and/or completion activities, Operator will collect noise data to verify the predicted noise levels and ensure compliance with COGCC limits. If compliance is not confirmed, Operator will employ additional mitigation to ensure compliance with COGCC rules, such as exhaust mufflers or replacement of offending noisy equipment with quieter systems.

• Operator will take continuous sound measurements from each noise point of compliance designated pursuant to Rule 423.a.(5). during pre-production activities and ongoing operations lasting longer than 24 consecutive hours such as drilling, completion, recompletion, Stimulation, and Well maintenance, in areas zoned residential or within 2,000 feet of a Building Unit. If compliance is not confirmed, Operator will employ additional mitigation to ensure compliance with COGCC rules, such as hay bales, additional sound walls, or customized semi-trailers.

• Operator will conduct background ambient noise surveys to establish baseline conditions for noise levels on the site per 423.b.

• Construction: Mitigation measures will be completed prior to the commencement of the noise generating activity. Temporary barriers will be installed within the limits of construction as shown on the site plan for the project and will remain in place for the duration of the noise-generating activity on the site.

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

Vendor selected to construct noise barrier will consider landowner's suggestion for visually appealing finish on noise barrier.
• A modeling project will be conducted by a third-party vendor to determine noise levels stemming from the electric generators and natural gas compressors to ensure the temporary noise barrier is adequate or if additional noise-reduction baffling will be required.
• If available, will have compressor company(s) install noise reduction baffling equipment on identified pieces of equipment.
• Will keep work traffic to a minimum during daytime. If heavy trucks will be sent to location, drivers will be notified of the following rules:
o No Compression Release Engine Brake (aka Jake Brake) within 2500 feet of well pad
o No unnecessary revving of engine while on work site
o Nighttime operations will not be conducted, unless responding to an emergency.
• By committing improving its cumulative impact plan, Noble Energy will look at the following production improvements to reduce trips of heavy trucks to location:
o Reduce initial oil and water tanks on location
o Improve pipeline system

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.

• Operator will direct site lighting downward and inward, such that no light shines above a horizontal plane passing through the center point light source.• Operator will use appropriate technology within fixtures that obscures, blocks, or diffuses the light to reduce light intensity outside the boundaries of the Oil and Gas Facility. • Operator will locate lighting inside and beneath the 32' noise barrier at 25' and take precautions to ensure that lights do not shine outside of openings in the noise barrier.

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

• Operator will direct site lighting downward and inward, such that no light shines above a horizontal plane passing through the center point light source.
• Operator will use appropriate technology within fixtures that obscures, blocks, or diffuses the light to reduce light intensity outside the boundaries of the Oil and Gas Facility.
• Operator will minimize lighting when not needed using timers or motion sensors; to minimize light pollution and obtrusive lighting.
• Operator will use full cut-off lighting; to minimize light pollution and obtrusive lighting.
• Operator will use lighting colors that reduce light intensity by using neutral white and cool white color lights to minimize light pollution and obtrusive lighting.
• Operator will use low-glare or no-glare lighting to minimize light pollution and obtrusive lighting.
• When operator has active operations involving personnel ongoing at an oil and gas location, Operators will provide sufficient on-site pre-production lighting to ensure the safety of all persons on or near the site.
• Prior to the Commencement of Production Operations, Operators will take all necessary and reasonable precautions to ensure that lighting from Oil and Gas Facilities does not unnecessarily impact the health, safety, and welfare of Persons occupying the Residential Building Units (RBU). This includes:
o Normal production activities will be limited to times where optimal natural lighting be utilized. This includes scheduling operations from sunrise to sunset
o 10-25-foot light towers with timers set at 30-minute increments
o Use cool-white tempered glass light colors to reduce light intensity
o Combine high-mount/narrow-beam angle setting to reduce the glare effect of the light sources
• Prior to the Commencement of Production Operations, Operators will take all necessary and reasonable precautions to ensure that lighting from Oil and Gas Facilities does not unnecessarily impact the health, safety, and welfare of Motorists… within 2,000 feet of the Oil and Gas Facility. This includes:
o Adjusting lighting sources to point toward the facility
o Use cool, white-tempered glass light colors to reduce light intensity
• Prior to the Commencement of Production Operations, Operator will take all necessary and reasonable precautions to ensure that lighting from Oil and Gas Facilities does not unnecessarily impact the health, safety, and welfare of Wildlife occupying any High Priority Habitat within 2,000 feet of the Oil and Gas Facility. This includes:
o Identify permanent and temporary housing of resident wildlife and ensure locations are recorded in wildlife report kept in-house
o Ensure workday is limited to sunrise to sunset to avoid unnecessary nighttime lighting of nests and/or burrows
Conduct daily walkthrough of facility to ensure no wildlife have built nest(s) in/around lighting sources. If nest(s) found, report will be issued to appropriate personnel to either remove nest and/or temporarily abandon lighting source until nest is abandoned.

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 Operational leadership will partner with a member of the Health, Safety, and Environment department, a representative from Land Development, contract vendor supplying odor-reducing chemical, and an Occupational Health representative to discuss use of odor-reducing chemical to reduce odor in the drilling shavings, oil-based mud, and/or other sources identified as causing nuisance odor.
• Drilling operations will utilize Benzaco drilling fluid: Odor Armor (Oil-based)/Group III/Aromatic Content 1.20%
• Drilling operations will keep a copy of the Safety Data Sheet (SDS) readily available for review, as described in OSHA Standard 29 CFR 1910.1200 (Hazard Communication) as well as local and state guidelines.

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

• An alternative base fluid will be used for the oil-based mud in a designated setback location. This base fluid has lower BTEX levels, is considered Non-Flammable and Combustible by OSHA/WHMIS criteria and is classified as a non-regulated material by the US DOT. More importantly, this alternative base fluid has a higher flash point than normal diesel base fluid, which limits the odor causing vapor associated with OBM.
• Oil and gas facilities and equipment shall be operated in such a manner that odors do not constitute a nuisance or hazard to public welfare. Operator will utilize advanced oil-based mud systems which target the reduction of aromatics. Hydrocarbon odors from production facilities are minimized and eliminated by keeping produced fluid hydrocarbons and natural gas contained within pipes, separators, tanks, and combustors. All tanks will be sealed with thief hatches and gaskets. Tank vapors are captured with properly sized piping and combustors.
• Operator will conduct regular odor surveillance downwind at the perimeter of the property during drilling, well completion, or rework, repair, or maintenance.
• All facilities onsite shall be subjected to an instrument-based leak detection and repair (LDAR) inspection at least monthly during drilling and completion and quarterly during production. Volumetric Testing Involves measurement of liquid volume which must be added or removed from system to maintain constant pressure; volume changes indicate either leaks or thermal expansion/contraction of liquid.

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: 85

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.

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	S	N/A; >2,640' Riparian area is Rp1FO shrub area along edge of Lone Tree Creek
Wetland	304	E	Mapped intermittent streambed wetland
Surface Waters of the State	261	N	Mapped semi permanently flooded freshwater pond

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	S	N/A

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	4266900	Recycled Water (Produced Water)	0	Unspecified Source	8300	Percentage Recycled Water	0 %
Ground Water	493280	Recycled Water (non-Produced Water)	0	Total Water Usage	476848 0		

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

City of Greeley will provide water from Hydrants from unspecified surface and groundwater sources.

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

Recycle and reuse of produced water is not planned for the wells associated with this Pad. In accordance with Noble’s dedication to mitigating impacts to the environment, Noble will implement its best practices regarding the proper handling and disposal of E&P waste, including produced 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	2521	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)
Construction	10.4	0
Post-interim Reclamation	3	0

Provide any further information regarding the location's HPH disturbance.

N/A; No part of WR OGDP 1 is within HPH.

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	2220	Non-Irrigated	16	Conservation Reserve Program(CRP)	0		
Non-Crop Land:	Rangeland	220	Forestry	0	Recreation	0	Other	22
Subdivided:	Industrial	0	Commercial	22	Residential	82		

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.

sheep farm

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	10.4	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.

There will be minimal incremental adverse impacts to the ecosystems, including vegetative communities as a result of the proposed development, which is located entirely within cultivated cropland and existing oil and gas development areas.

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
39 - Nunn loam, 0%-1% slopes	0.3
51 - Otero sandy loam, 1% to 3% slopes	10.1

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 ResidentialBuilding Units:	10	16
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	0.004068698 4	0.02	0.14	0	0	8.17	1.317540276E-05
Non-Road Internal Combustion Engines	46.33	42.18	46.33	20.76	1.74	5854.01	0.04
Drill Mud	0.1	0.45	1.16	1.38	0.65	176.71	0.000320700446086823
Flowback or Completions	0.08	0.36	0.93	1.1	0.52	141.37	0.000256560356869459
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	1.4	1.66	0.79	0.1	0
Separators	0	0	0	0	0	0	0
Fugitives			0.04	0.05	0.02	0.00301280087988922	
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: 1500 During Completions: 3442

During Drilling: 3760 During Interim Reclamation: 800

During Production: 23760

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	60.48	33.6	1.31	20.11	36.58	8.24	0	1798.03	82.38	2040.73
Drill Mud	10.08	12.62	2.52	7.83	75.36	0.9	0.05	0.42	0	109.74
Flowback or Completions	8.07	10.1	2.01	6.26	60.29	0.72	0.04	0.34	0	87.79
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	12.17	15.24	3.04	9.45	90.99	1.09	0.07	0	0	131.99
Separators	0	0	0	0	0	0	0	0	0	0
Fugitives	0.36	0.45	0.09	0.28	2.66	0.03	0	0	0	3.86
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.

Due to the modern flowback technology that will be employed for WR OGDP1 which eliminates uncontrolled emission flowback point sources, the emissions of HAP during pre-production activities will be predominately those that come from engines powering completions equipment. Therefore, no incremental impacts to public health will result from pre-production activities outside of the well pad.

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.

Noble Energy prepared a comprehensive Cumulative Impacts Plan for the entirety of the Wells Ranch CDP, and this plan has been submitted to the COGCC. Based on the review of specific hazardous pollutant emissions and other air emissions, as detailed in the Air Resources section of this Cumulative Impacts Plan, that will be eliminated as part of the plugging and removal process and the advanced design and technological enhancements employed for the proposed locations within the Wells Ranch CDP there should not be any chronic, short- or long-term incremental adverse impacts to Public Health. The emissions removed in conjunction with the removal of the Legacy Wells should have offsetting Public Health impacts to the proposed Wells Ranch CDP operations resulting in beneficial Cumulative Impacts and reducing negative Cumulative Impacts.

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	1500	1920	2408	1500	66
Annual	1500	1920	2408	1500	972

Estimated total pounds (lbs) of proppant to be used during completions activities. 7200000
0

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

The two types of proppants utilized during completion activities will be 40/70 and 100 mesh.

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.

We currently use a self-contained proppant storage system that is gravity fed eliminating silica dust leaving location while meeting OSHA requirements inside the boundaries of location.

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	21	Active, built	21
Permitted by COGCC, unbuilt	2	Permitted by COGCC, unbuilt	15
Permitted by Relevant Local Government & not COGCC, unbuilt	0	Proposed	0
Proposed	0	Plugged and Abandoned	28

Total acreage disturbance during construction of the active and proposed oil & gas locations within 1-mile of the proposed Oil & Gas Location: 50

Source for acreage total:

- [ ] Field Observation/Measurement
- [X] COGCC Location Files
- [ ] Aerial PhotosOther
- [X] 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.

COGIS

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
- [X] COGCC Location Files
- [ ] Aerial PhotosOther
- [X] Other

	Permitted Onsite Storage Capacity	Existing Onsite Storage Capacity
Oil	0	21
Condensate	0	0
Produced Water	0	0
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.

COGIS

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 OGDP, 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 OGDP:

	Construction		Post-interim Reclamation	
	Total Acreage (acres)	Total HPH Acreage (acres)	Total Acreage (acres)	Total HPH Acreage (acres)
New roads, including access roads	5.1	0	5.1	0
Pipelines	30.6	0	0	0
Utilities	0	0	0	0

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

N/A; No part of WR OGDP 1 is within HPH.

Number of miles of the existing lease road that are planned to be used to access these location(s): 0.68

BENEFICIAL IMPACT INFORMATION

Equipment and Facility Removal

Total number of existing wells that are planned to be plugged and abandoned as part of this OGDP: 49

Total number of existing locations that are planned to be closed and undergo final reclamation as part of this OGDP: 49

Total number of acres that are planned to be reclaimed through the closing of existing locations: 73.5

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

Oil Tanks: 49

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 OGDP.

There are primarily three (3) recurring themes that are the “Driving Forces” contributing not only to offsetting and mitigating adverse Cumulative Impacts, but also to promoting beneficial Cumulative Impacts. The 3 Driving Forces are as follows:
1) Plugging and removal of existing operated and non-operated legacy wells (“Legacy Wells”);
2) Implementation of technologically advanced completion and production designs engineered to significantly reduce overall impacts; and
3) Going beyond compliance to enhance ecosystem restoration and land conversion back to vegetative states, enabling carbon capture and sequestration.
Development of the Wells Ranch CDP will consist of a robust program to retire existing operated and non-operated legacy wells (“Legacy Wells”) within the boundaries of the Wells Ranch CDP. The plugging and removal of the Legacy Wells will have a positive effect to neighboring Residential Building Units (“RBUs”) by lessening the Surrounding Oil and Gas Impacts.

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

Tankless production design removes onsite storage of oil, gas, condensate, and water. Eliminating onsite storage removes the potential for upset conditions, thereby reducing potential impacts to Residential Building Units, wildlife, and soil resources. Tankless production design also eliminates point sources for emissions, thereby, reducing the emissions profile. Additionally, tankless production design alleviates impacts to the public welfare impacts and the scenic values of nearby Residential Building Units and communities.

MITIGATION INFORMATION

Item	Impacted Resource	Mitigation Description
1	Public Welfare	Odors will be prevented, reduced, or mitigated by the following BMP: • An alternative base fluid will be used for the oil-based mud in a designated setback location. This base fluid has lower BTEX levels, is considered Non-Flammable and Combustible by OSHA/WHMIS criteria and is classified as a non-regulated material by the US DOT. More importantly, this alternative base fluid has a higher flash point than normal diesel base fluid, which limits the odor causing vapor associated with OBM. • Oil and gas facilities and equipment shall be operated in such a manner that odors do not constitute a nuisance or hazard to public welfare. Operator will utilize advanced oil-based mud systems which target the reduction of aromatics. Hydrocarbon odors from production facilities are minimized and eliminated by keeping produced fluid hydrocarbons and natural gas contained within pipes, separators, tanks, and combustors. All tanks will be sealed with thief hatches and gaskets. Tank vapors are captured with properly sized piping and combustors. • Operator will conduct regular odor surveillance downwind at the perimeter of the property during drilling, well completion, or rework, repair, or maintenance. • All facilities onsite shall be subjected to an instrument-based leak detection and repair (LDAR) inspection at least monthly during drilling and completion and quarterly during production. Volumetric Testing Involves measurement of liquid volume which must be added or removed from system to maintain constant pressure; volume changes indicate either leaks or thermal expansion/contraction of liquid.
2	Public Health Resources	All facilities onsite shall be subjected to an instrument-based leak detection and repair (LDAR) inspection at least monthly during drilling and completion and quarterly during production. Volumetric Testing Involves measurement of liquid volume which must be added or removed from system to maintain constant pressure; volume changes indicate either leaks or thermal expansion/contraction of liquid.
3	Public Welfare	Noise will be prevented, reduced, or mitigated by the following BMP:• A baseline study will be conducted prior to commencement of construction and dirt work, which includes both A and C scale measurements. • Noise Monitoring during Drilling and Completions: Upon commencement of drilling and/or completion activities, Operator will collect noise data to verify the predicted noise levels and ensure compliance with COGCC limits. If compliance is not confirmed, Operator will employ additional mitigation to ensure compliance with COGCC rules, such as exhaust mufflers or replacement of offending noisy equipment with quieter systems. • Operator will take continuous sound measurements from each noise point of compliance designated pursuant to Rule 423.a.(5). during pre-production activities and ongoing operations lasting longer than 24 consecutive hours such as drilling, completion, recompletion, Stimulation, and Well maintenance, in areas zoned residential or within 2,000 feet of a Building Unit. If compliance is not confirmed, Operator will employ additional mitigation to ensure compliance with COGCC rules, such as hay bales, additional sound walls, or customized semi-trailers. • Operator will conduct background ambient noise surveys to establish baseline conditions for noise levels on the site per 423.b. • Construction: Mitigation measures will be completed prior to the commencement of the noise generating activity. Temporary barriers will be installed within the limits of construction as shown on the site plan for the project and will remain in place for the duration of the noise-generating activity on the site.

4	Public Health Resources	Vendor selected to construct noise barrier will consider landowner's suggestion for visually appealing finish on noise barrier. • A modeling project will be conducted by a third-party vendor to determine noise levels stemming from the electric generators and natural gas compressors to ensure the permanent noise barrier is adequate or if additional noise-reduction baffling will be required. • If available, will have compressor company(s) install noise reduction baffling equipment on identified pieces of equipment. • Will keep work traffic to a minimum during daytime. If heavy trucks will be sent to location, drivers will be notified of the following rules: o No Compression Release Engine Brake (aka Jake Brake) within 2500 feet of well pad o No unnecessary revving of engine while on work site o Nighttime operations will not be conducted, unless responding to an emergency. • By committing improving its cumulative impact plan, Noble Energy will look at the following production improvements to reduce trips of heavy trucks to location: o Reduce initial oil and water tanks on location o Improve pipeline system
5	Public Welfare	• Operator will direct site lighting downward and inward, such that no light shines above a horizontal plane passing through the center point light source.• Operator will use appropriate technology within fixtures that obscures, blocks, or diffuses the light to reduce light intensity outside the boundaries of the Oil and Gas Facility. • Operator will locate lighting inside and beneath the 32' noise barrier at 25' and take precautions to ensure that lights do not shine outside of openings in the noise barrier.
6	Air Resources	As required by the Colorado Air Pollution Control Division (APCD) Regulation 7 Part D VI.C, Noble Energy will prepare and submit an air quality monitoring plan for pre-production and early production activities prior to initiating drilling activities. This plan will provide the detail of the proposed air monitoring, but the proposed program will be the equivalent of the following – Noble will deploy the Canary-S unit, provided by Project Canary, using PID sensors provided by Lunar Outpost. Each unit will also be equipped with a triggerable summa cannister opening device. The Canary S is a stationary, fence line, continuous monitoring sensor unit that utilizes a photoionization detector (PID) technology. A PID sensor contains a lamp that produces photons which carry enough energy to break some molecules into ions. The PID lamp in the Canary-S unit is a 10.6 electron-volt (eV) lamp, which will ionize any VOC with an ionization energy of less than 10.6 eV as it passes across the lamp. The produced ions then generate an electrical current that is measured as the output of the detector. Methane has an ionization energy above 10.6 eV and as such will not be directly measured by the PID; however, hazardous air pollutants and other VOCs have ionization energies below 10.6 eV and are detected by the PID. Measurements meeting certain criteria will trigger deployment of summa cannisters, which will pull air samples allowing for more detailed review of component concentrations, including methane and BTEX.
7	Public Welfare	As required by the Colorado Air Pollution Control Division (APCD) Regulation 7 Part D VI.C, Noble Energy will prepare and submit an air quality monitoring plan for pre-production and early production activities prior to initiating drilling activities. This plan will provide the detail of the proposed air monitoring, but the proposed program will be the equivalent of the following – Noble will deploy the Canary-S unit, provided by Project Canary, using PID sensors provided by Lunar Outpost. Each unit will also be equipped with a triggerable summa cannister opening device. The Canary S is a stationary, fence line, continuous monitoring sensor unit that utilizes a photoionization detector (PID) technology. A PID sensor contains a lamp that produces photons which carry enough energy to break some molecules into ions. The PID lamp in the Canary-S unit is a 10.6 electron-volt (eV) lamp, which will ionize any VOC with an ionization energy of less than 10.6 eV as it passes across the lamp. The produced ions then generate an electrical current that is measured as the output of the detector. Methane has an ionization energy above 10.6 eV and as such will not be directly measured by the PID; however, hazardous air pollutants and other VOCs have ionization energies below 10.6 eV and are detected by the PID. Measurements meeting certain criteria will trigger deployment of summa cannisters, which will pull air samples allowing for more detailed review of component concentrations, including methane and BTEX.

OPERATOR COMMENTS AND SUBMITTAL

Print Name: Ann Feldman Title: Regulatory Manager

Email: regulatory@ascentgeomatics.com Date: 09/28/2021

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

Total Attach: 0 Files

General Comments

User Group	Comment	Comment Date
		Stamp Upon Approval

Total: 0 comment(s)