

**CITY OF GREELEY
LAND USE APPLICATION/USE BY SPECIAL REVIEW**

APPLICANT:



**1775 SHERMAN STREET, SUITE 3000
DENVER, COLORADO 80203**

PROPOSED OIL AND GAS LOCATION AND WELLS:

USR2022-0015

**DENALI STATE 05N67W13 1-23 PAD/FACILITY
SESW SECTION 13, TOWNSHIP 5 NORTH, RANGE 67 WEST, 6TH P.M.
WELD COUNTY, COLORADO**

**DENALI STATE 01N, DENALI STATE 02N, DENALI STATE 03N, DENALI STATE 04N,
DENALI STATE 05N, DENALI STATE 06N, DENALI STATE 07N, DENALI STATE 08N,
DENALI STATE 09N, DENALI STATE 10N, DENALI STATE 11N, DENALI STATE 12N,
DENALI STATE 13N, DENALI STATE 14N, DENALI STATE 15N, DENALI STATE 16N,
DENALI STATE 17N, DENALI STATE 18N, DENALI STATE 19N, DENALI STATE 20N,
DENALI STATE 21N, DENALI STATE 22N, DENALI STATE 23N
23 WELLS**

**SUBMITTAL AUGUST 18, 2022
RESUBMITTAL OCTOBER 7, 2022
RESUBMITTAL DECEMBER 14, 2022**

SUBMITTED BY:



**8620 Wolff Court
Westminster, Colorado 80031**

CITY OF GREELEY LAND USE APPLICATION/USE BY SPECIAL REVIEW

**PDC ENERGY, INC.
DENALI STATE 05N67W13 1-23 PAD/FACILITY**

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**PDC ENERGY, INC.
DENALI STATE 05N67W13 1-23 PAD/FACILITY**

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Project Narrative: Overview of Use by Special Review

Description of Intended Use

PDC Energy, Inc. (PDC) submits this application for a Use by Special Review for the proposed Denali State 05N67W13 1-23 Pad/Facility, located in the southeast quarter of the southwest (SESW) of Section 13, Township 5 North, Range 67 West of the 6th P.M. within the City of Greeley limits. More specifically, the proposed project is located approximately a quarter of a mile east of the intersection of WCR 56 and 107th Avenue, on the southern end of the 253.127-acre parcel of land owned by Matthew J Chismar Irrevocable Trust. Please refer to the Construction Drawings for the exact location. PDC proposes to drill twenty-three (23) horizontal wells and construct temporary and permanent facilities needed to support drilling, completion, and production operations.

In general, the proposed project is a multiple oil and gas well and a facilities pad, located on the southern edge of the parcel and will be operated by PDC. The proposed well and facility pad will include 23 horizontally drilled wells, 23 separators, 2 permanent water tanks, 2 maintenance tanks, and other equipment. These wells and production facilities will be built in a cluster arrangement. This layout allows for a smaller footprint with centralized facilities for the proposed 23 wells. The cluster concept and horizontal drilling essentially eliminate the need to develop additional well pads, thus reducing the footprint on the surface.

A pre-application meeting with City of Greeley personnel was held on May 12, 2022, and the preliminary siting of the project was given approval to move forward with the USR process.

This application for a Use by Special Review permit pursuant to Greeley, Colorado – Municipal Code / Title 24- Development Code / Chapter 11.-Supplemental Standards / Sec. 24-1102. -Oil and gas. includes a full description of the drilling, completion, production, and maintenance processes related to the 23 proposed wells.

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Familiarity with City of Greeley and State of Colorado Regulations

PDC is familiar with the Colorado Oil and Gas Conservation Commission (COGCC) Rules and Regulations as well as the City of Greeley's regulations as they relate to oil and gas operations. PDC is aware of the drilling, operation maintenance, and abandonment procedures that are established by the COGCC and the City of Greeley.

It is PDC's intent to develop the Denali State 05N67W13 1-23 Pad/Facility in a manner that is not detrimental to the public health, safety, welfare, the environment, and wildlife resources, or detrimental to the character of the surrounding area. The proposed use shall be consistent with the Imagine Greeley Comprehensive Plan. The location, site, design, and operation characteristics of the proposed use shall be compatible with the existing and future land uses within the general area in which the proposed use is to be located, and will not create significant noise, traffic or other conditions or situations that may be objectionable or detrimental to other permitted uses in the vicinity. PDC understands that reasonable conditions may be placed on uses by special review to protect public health, safety, welfare, the environment, and wildlife resources. The site shall be physically suitable for the type and intensity of the proposed land use. The proposed land use shall not adversely affect traffic flow or parking in the neighborhood.

PDC is a responsible operator and will abide by all setbacks by placing wellheads, production tanks and/or associated on-site production equipment at the required distance per COGCC Rules and Regulations, and City of Greeley Code standards.

All exploration and production waste, including drilling mud or other drilling fluids, will be stored, handled, transported, treated, recycled, or disposed of in accordance with COGCC regulations, to prevent any significant adverse environmental impact on air, water, soil, or biological resources. (Ord. 27, 1998 §1).

PDC will abide by State law and regulations concerning noise abatement (Title 25, Article 12, C.R.S.), together with applicable local government ordinances, rules, or regulations. PDC has detailed its plans in this Land Use Application for addressing all nuisance impacts in Section III. Environmental and Safety Plan, and all safety impacts in Section IV. Emergency Response and Fire Protection Plan.

Imagine Greeley Comprehensive Plan

The proposed use shall be consistent with the Imagine Greeley Comprehensive Plan. PDC has and will continue to demonstrate responsible stewardship of natural resources and the environment within the City of Greeley limits, as well as Weld County and the State of Colorado. PDC acknowledges the City of Greeley's wish to continue to build and expand upon existing efforts as they relate to the environment and protection of natural resources, as well as its continuing efforts to develop new ways to preserve open lands. PDC's focus on water and air quality is consistent with the City of Greeley's in the face of the City's future growth.

PDC designed the Denali State 05N67W13 1-23 Pad/Facility in an effort to stay consistent with other use by special review locations within the City of Greeley. PDC will be reseeded the entire location with Native Seed Mix or will consult with the surface owner to plant the type of crop that is planned for the crop season after interim reclamation is complete. No landscaping is proposed for this site. Through a recent re-design of this location, PDC has reduced the overall size of the disturbance, moving the location further

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away from both residential and highway sight lines. With the reduction in size and rural landscape of the surrounding area, PDC believes recontouring to natural grade and seeding with native grasses will adequately mitigate any potential visual impacts associated with the location.

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List of Property Owners within 500 feet of the Proposed Well Site

CHISMAR MATTHEW J IRREVOCABLE TRUST
3051 TALIESIN WAY
FORT COLLINS, COLORADO 805249383
WELD COUNTY PARCEL 095713000013

SHUPE BROS CO
PO BOX 1447
GREELEY, COLORADO 806321447
WELD COUNTY PARCEL 095713000012

DUKE & ELEANOR PHILLIPS FAMILY LLLP
1402 NUNN CREET CT
FORT COLLINS, COLORADO 805263465
WELD COUNTY PARCEL 095724000017

GOLDBERG ELAINE ROSAMOND LIVING TRUST
15343 HERITAGE CIR
THORNTON, COLORADO 806029214
WELD COUNTY PARCEL 095724000016

LEI INVESTMENTS LLC / STEVE S LUNDVALL
2015 CLUBHOUSE DRIVE, SUITE 101
GREELEY, COLORADO 806343651
WELD COUNTY PARCEL 095713101002

WELL SITE SURFACE OWNER:

CHISMAR MATTHEW J IRREVOCABLE TRUST
3051 TALIESIN WAY
FORT COLLINS, COLORADO 805249383

Operator and Surface Owner Information

Operator:

PDC Energy, Inc.
1775 Sherman Street
Suite 3000
Denver, Colorado 80203

Surface Owner

Chismar Matthew J Irrevocable Trust
3051 Taliesin Way
Fort Collins, Colorado 80524

Project Plan prepared by:

Ascent Geomatics Solutions
8620 Wolff Court
Westminster, Colorado 80031
(303) 928-7128

Operating Plan

The Operating Plan is divided into the Drilling Phase and Protection of Water Formations, the Completion Phase, the Production Phase, and the Plugging and Abandonment Phase.

This location is not considered an Urban Mitigation Area, as described by the Colorado Oil and Gas Conservation Commission (COGCC) Rules and Regulations – Definitions (100 Series).

All phases of operations including drilling, completion, production, abandonment, and reclamation are designed to adhere to the Rules and Regulations of the COGCC, especially COGCC 300 Series (Permitting Process), 400 Series (Operations and Reporting), 600 Series (Safety and Facility Operations), 900 Series (Environmental Impact Prevention), 1000 Series (Reclamation), 1100 Series (Flowlines), and 1200 Series (Protection of Wildlife Resources).

Enclosed flares shall be utilized during the drilling, completion, recompletion, reworking, production, repair, and maintenance of the pad site.

PDC will use Best Management Practices during all phases of operations.

Routine fire inspections are required during the different phases of operation and, at a minimum, an annual inspection, upon completion of the wells and production facilities. The Greeley Fire Department will coordinate and schedule these inspections.

Drilling Phase and Protection of Water Formations

The proposed oil and gas location will be approximately 16.21 acres in size and construction of this site will include leveling the pad to accommodate the drilling rig. **Sound walls to mitigate sound and light will be installed after the pad is constructed, prior to the commencement of drilling.** Once the pad is completed, a small surface drilling rig will be brought onto location and rigged up to drill the surface portion of the well for the 23 wells on the pad. This will take approximately twenty-four (24) hours per well.

Drilling operations, which run 24 hours a day until completed, will commence after the rig is “rigged up”. A 13-1/2-inch surface hole will be drilled to approximately 1750 feet using fresh water. Surface casing 9-5/8 inches in diameter will then be run and cemented to surface to protect any shallow freshwater zones. Surface casing setting depth is determined from subsurface ground water maps prepared by the State Engineer and supplemented by the latest data available from offsetting wells. A baseline water sample will be obtained from water wells within ½ mile of the proposed location to ensure water quality. When all 23 wells have surface casing set, the surface rig will move off the Denali location. It is estimated to take one day per well to drill and set surface casing.

Once the location is clear from the surface rig, a liner is set on the pad where the drilling rig will be rigged up to contain and prevent any potential fluid from hitting the ground. In addition, wooden matting boards will be placed over the liner as a secondary containment for fluids and stability for the drilling rig. Once the location is prepped, the drilling rig will move in and rig up on the first well on location. The Blowout Preventer Equipment (BOPE) will be installed and tested prior to drilling. After testing, the drilling of the

production hole will commence. A bit and directional tools comprise the bottomhole assembly (BHA). The directional tools are placed behind the bit to steer the assembly, and continuously survey and send data to the surface to monitor the wellbores 3D position spatially, and to track in the targeted formation. The 8-1/2-inch bit and BHA will drill-out of the surface casing shoe and drill the “vertical” portion of the hole in which angle is built to separate wells into their planned slots. Once the vertical portion of the hole is drilled, the curve will be initiated. The curve will take approximately 1,000 feet to drill and will then place the wellbore at approximately 90° in order to enter the targeted hydrocarbon bearing zone. The wells will be drilled horizontally or parallel to the surface for approximately 1.5 miles west (Denali State 01N-11N) and approximately 2.0 miles east (Denali State 12N-23N), at a vertical depth of 6,800-7,200 feet below the ground. The total Measured Depth (MD) for the proposed wells is approximately 15,000 feet.

Once the horizontal section of the wellbore is drilled, a string of production casing will be run into the wellbore. This casing will be 5-1/2 inches in outer diameter and weigh 20 pounds per linear foot. The grade will be P110IC, which has a collapse rating of 12,100 psi and an internal yield rating of 12,630 psi. This casing will be cemented into place to isolate the productive zones of the reservoir. The cement sheath will isolate the entire casing string from the total depth of the well back to surface.

PDC’s drilling rigs are equipped with a closed loop system, therefore, the drilling mud is recycled and re-used, and reserve pits will not be constructed. The drilling rig will be on location for approximately 4-5 days per horizontal well for a total of approximately 90-110 days. At the end of the drilling phase, the drilling rig will be moved off location.

Best industry practices shall be utilized during drilling operations to prevent fluids from reaching the flare during a “kick” or upset conditions.

Completion Phase

The completion phase typically begins when the drilling equipment is transported off the location. There will be no intentional rest period between drilling and completion operations. Lag time could be encountered dependent on vendor availability. Completion operations are conducted twenty-four (24) hours per day intermittently over a period of several weeks. The site may be regraded to accommodate the completion operations and anchors may be set for the completion operations. For horizontal wells, multiple fracture stages are induced along the length of the wellbore in the respective formation that the well has been drilled.

During hydraulic fracturing, water and some additives are pumped at high rates and pressures that exceed the minimum in-situ rock stresses and hydraulically fracture the formation. Sand is then pumped into the created fracture to allow gas and oil to flow freely from the formation into the well bore. The fracturing equipment will consist of multiple flowback tanks, pressure pumps, blending and bulk material trucks with other necessary equipment. After fracturing is completed, the mobile equipment is removed, excluding tanks that are used to retain the water that is produced during flowback and testing operations. No water is allowed to accumulate or be disposed of on surface. All water is hauled to approved disposal sites or recycled for stimulation use. The flowback tanks will remain on location until the well is rerouted through standard production equipment.

It takes approximately 2-3 days to hydraulically fracture each well for a total of 45-60 days on this location.

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COGCC regulations give the operator three months to complete restoration activities, but restoration may occur sooner than three months.

Production Phase

The production equipment for the Denali State 05N67W13 1-23 Well Pad/Facility will be located adjacent to and south of the wells. The equipment on this site will consist of the following components:

2 permanent water tanks, 6 temporary water tanks, 2 maintenance tanks, 1 partially buried water vault, 8 combustors, 1 temporary water combustor, 3 surge vessels, 2-2 phase vertical separators, 5 OCDs, 1 unloading separator, 3 separator LP vapor recovery units, 1 automation tower, 3 instrument air skids, 3 oil LACT, 2 water LACT, 23 separators, 1 meter area.

If needed, a temporary generator will be used before connecting to electric lines; a short noise control fence will be installed or other agreeable measures to mitigate the noise from this generator. Tanks and facilities shall be painted per COGCC Rules. The steel berm ring around the facility will hold 150% of the capacity of the largest tank within the berm.

Flowlines will be installed but will not leave the oil and gas operations area. Additionally, all flowlines will be pressure tested at least annually to verify integrity and will remain in full compliance with COGCC 1100 Series Rules.

Connecting the well pad to pipeline is anticipated by 3rd quarter 2025. A PDC employee or contractor called a "lease operator," then begins monitoring the well on a scheduled basis. The lease operator reports the tank measurements of the oil, gas sales, and pressure readings. Much of this production information is compiled and submitted to the COGCC on a monthly basis.

In addition, the lease operator will inspect the site for hazards and weed control, maintaining the appearance of the Denali State 05N67W13 1-23 Pad/Facility. For the first few months, water and oil will be hauled daily from the location. As volumes decline, water and oil hauling will also decline.

Plugging and Abandonment Phase

At the time the wells become sub-economic to operate, PDC or PDC's successors will engage the services of a plugging rig to remove production equipment from the wellbores and plug the productive zones with a combination of bridge plugs and cement plugs in accordance with COGCC Rules and Regulations. If the separators and tanks on the surface of the land are no longer needed for other wells, they will be removed. Surface restoration will involve removal of any above-ground casing and the installation of regulation markers that will not interfere with subsequent surface use.

After all production equipment is removed, the surface will be restored to the original grade with reseeded in accordance with COGCC Rules and Regulations. This may be waived with the permission of the surface owner at the time of final restoration if there has been further land engineering that would conflict with the drill site being restored as described herein.

All transmission and/or flow lines shall be completely removed from the ground upon entering the abandonment phase. No underground lines that can or may contain any flammable product shall remain in the ground after the facility is abandoned.

Water Resources for Drilling Activities

All of the water used for drilling and completion operations will be fresh water. The optimum water source during drilling operations will be determined by PDC prior to drilling of the wells. It is anticipated that the water used during the completion operations for fracture stimulation will be provided by Noble Midstream Partners (Sheet 11 of the Construction Drawings references Laramie River Devco LP water line – this water line was acquired by Noble Midstream Partners. Laramie River Devco LP, Laramie River LLC, and Noble Midstream Partners are part of Chevron Power and Pipeline. Please refer to the Water Assurance document) and will be transferred to location by means of pipes and pumps and not delivered from an offsite source by means of tanker trucks. It is estimated that for each of the horizontal wells, the estimated number of truckloads of water and associated truck traffic that can be eliminated by virtue of transferring water by pipe and pumps could be up to approximately 1,300 truckloads per well. This process will eliminate approximately 30,000 truckloads throughout PDC's operations.

Compatibility with Surrounding Property Uses

The site does not interfere with the existing use of the area. The parcel is zoned as agricultural and remains compatible with the area as surrounding parcels are zoned Agricultural (H-A) and vacant land.

Above-ground equipment will be painted a neutral brown "sand" or similar color to best blend in with the surroundings.

Employees and Hours of Operation

There are no permanent employees on this site. The site will be visited by a PDC pumper on a daily basis. The employee is typically not on site for longer than one to two hours at a time.

The location will produce oil and gas 24 hours a day 7 days a week. On average one employee will visit the site once each day in a pick-up truck. Trucks will haul product from the location as needed and will steadily decline.

Site Maintenance

All disturbed areas shall be kept free of noxious weeds and debris. If necessary, a third party weed control service will be contracted annually to prevent and control the reoccurrence of noxious or excessive weed growth. Weeds that cannot be controlled by this method will be sprayed as needed with a systemic herbicide. Any additional weed control required to maintain the site free of weeds will be implemented if the standard plan is not sufficient.

Description of Water and Sewer

This is an unmanned facility; therefore, no water or sewer will be needed. Due to the lack of employees permanently on site, a water connection is not necessary. Bottled water will be available during construction and operations.

Proposed Landscaping

PDC will be reseeded the entire location with Native Seed Mix or will consult with the surface owner to plant the type of crop that is planned for the crop season after interim reclamation is complete. No landscaping is proposed for this site. Through a recent re-design of this location, PDC has reduced the overall size of the disturbance, moving the location further away from both residential and highway sight lines. With the reduction in size and rural landscape of the surrounding area, PDC believes recontouring to natural grade and seeding with native grasses will adequately mitigate any potential visual impacts associated with the location.

Timing/Phases of Operations:

Denali Pad/Wells

- | | | |
|------------------------|-----------|------------------------|
| • Construction Phase 1 | 2/1/2024 | Lasting +/- 60 days |
| • Drilling Phase | 6/9/2024 | Lasting +/- 80-90 days |
| • Completion Phase | 1/1/2025 | Lasting +/- 80-90 days |
| • Flowback Phase | 2/30/2025 | Lasting +/- 45-60 |
| • Production Phase | 3/15/2025 | |

*Dates referenced above are subject to change depending on drilling schedule and rig availability

The Drilling Phase, Completion Phase, and Production Phase will operate with two 12-hour shifts.

Environmental and Safety Plan

Setbacks

The proposed Denali State 05N67W13 1-23 Pad/Facility will comply with City of Greeley setback standards and COGCC Rules and Regulations for cultural setbacks.

Air and Water Quality

Emission Control System: Test separators and associated flow lines and sand traps shall be installed on-site to accommodate green completions techniques pursuant to COGCC Rules and Regulations. In the anticipated absence of a viable gas sales line, the flowback gas shall be thermally oxidized in a combustor, which will be installed and kept in operable condition for at least the first ninety (90) days of production pursuant to CDPHE rules. The ECD shall have an adequate capacity for 1.5 times the largest flowback within a 10-mile radius, will be flanged to route gas to other or permanent oxidizing equipment, and shall be provided with the equipment needed to maintain combustions where non-combustible gases are present. A closed-loop system will be utilized at this site.

In an effort to continue to reduce and mitigate the impacts of installing tanks, PDC is committed to using Lease Automatic Custody Transfer (LACT) Units. Advantages to utilizing LACT Units include: LACT pumps are electric and enclosed, reducing noise; less likely to have spills because of improved connections; truck loading times are two times faster, reducing the amount of time a truck is on location; truck vent lines are sent to the enclosed combustion devices, which are 95% efficient destruction of VOCs; and oil haulers no longer need to climb to the top of tanks and open thief hatches to gauge tanks, thus eliminating emissions from blowing down tanks and exposure to tank vapors.

The COGCC sets forth specific requirements for casing setting depths necessary to protect ground water sources, and all drilling permits ensure that those setting depths are achieved.

In order to ensure the protection of all freshwater resources, 9-5/8" steel surface casing will be set to a depth at least fifty (50) feet below the base of the deepest water well within one mile of the surface location as required by the COGCC and will be cemented from the bottom of the pipe up to surface. The COGCC reviews all drilling permits for adequate surface casing setting depths and cementing programs based on subsurface ground water maps prepared by the State Water Engineer and offset well data.

Noise Control

Any operations involving the use of a drilling rig, workover rig, or fracking, and any equipment used in the drilling, completion, or production of a well are subject to and will comply with the noise regulations set forth by the City of Greeley, wherein compliance will be met by abiding by state environmental and noise requirements set forth in COGCC Rule 423. PDC's contract drilling company will comply with COGCC Rules and Regulations for noise abatement. In addition to following the COGCC Rules and Regulations, PDC, whenever possible, will schedule deliveries and construction traffic to and from the site during daylight hours. PDC will perform all of the following to mitigate noise from the operation:

- A noise model from a qualified third-party noise consultant will be conducted on the drilling and hydraulic fracturing equipment prior to commencing operations to determine potential sensitive areas, which includes an ambient survey. Additional source-based noise mitigation will be implemented as required to address the results of the model.
- **Sound walls will be installed around the entire perimeter of the well pad in order to mitigate sound and light. Installation will be after the pad is constructed, prior to the commencement of operations. Sound walls will remain in place approximately 8 months, more or less, and taken down after the completion phase, prior to production.**
- An internal process has been developed to quickly address any potential noise issues that arise during operations.
- **In addition to sound walls**, PDC will further reduce noise from completions operations by using a frac fleet consisting of the latest sound mitigation technology available to the operator. Containerized sand delivery and storage will also be used for further noise reduction.
- Due to the topography and distance to the nearest residential building unit being 2,300 feet from the proposed location and being owned by the surface owner under the Surface Use Agreement, it is not anticipated that noise mitigation in the form of sound walls will be necessary at the proposed location. After construction is completed, equipment installed and production begins, noise levels will be assessed to determine if mitigation measures will be required.

Visual Impacts

The production facilities will be painted in accordance with COGCC Rule 425 regarding Visual Mitigation, which states: "...all permanent equipment at new and existing Oil and Gas Facilities, regardless of construction date, which are observable from any public highway, road, or publicly-maintained trail, will be painted with uniform, non-contrasting, non-reflective color tones (similar to the Munsell Soil Color Coding System), and with colors matched to but slightly darker than the surrounding landscape."

Lighting

During drilling, lighting will be utilized on site to facilitate a 24-hour drilling schedule. **A temporary sound wall will be installed around the entire perimeter of the well pad. The walls are 32 feet high, with LED lights placed 8-10 feet below the top of the wall. These lights are placed every 200-300 feet along the wall, directed downward to mitigate any outside exposure to unwanted lighting. The drilling phase includes 8 lights around the walls while the completion phase will require 14 lights to be installed. These are only temporary and not permanent.** During the drilling and completions phases lights will be pointed inward and downward **and screened by sound walls**. During the production phase, lights will be pointed inward and downward and will be switch-controlled and only in use while PDC personnel are present on location. Due to the topography and distance to the nearest residential building unit being 2,300 feet from the proposed location and being owned by the surface owner under the Surface Use Agreement, it is not anticipated that additional light mitigation will be necessary at the proposed location.

Odor and Dust

All requirements applicable in COGCC regulations related to odor and dust will be adhered to by PDC. No noxious, prolonged, or unusually high amounts of odor are expected from the proposed drilling of the wells. Oil and gas facilities and equipment shall be operated in such a manner that odors and dust do not

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constitute a nuisance or hazard to public welfare. PDC shall employ practices for controlling fugitive dust caused by operations, which may include but are not limited to treating roads and location with water, the use of speed restrictions, regular road maintenance, and silica dust controls when handling sand used in hydraulic fracturing operations.

Access Roads

PDC will maintain all access roads in compliance with the City of Greeley Municipal Code and Weld County regulations. The access roads will be constructed to accommodate local emergency vehicles. The roads will be maintained for access at all times. Traffic will be routed to minimize local interruption. Please see the Construction Drawings for ingress/egress location. The location shall have one access road coming from County Road 25/95th Avenue during drilling and completion phases of the project as depicted on Sheet 10 of 25 of this exhibit.

Waste Disposal

PDC will dispose of all wastes in accordance with COGCC and/or the Colorado Department of Public Health and Environment rules and regulations. For exploration and production waste, the COGCC requires that a waste management plan be included with the Form 2A Oil and Gas Location Assessment permit application. PDC can provide the City of Greeley with copies of all waste management reports, if requested. PDC will be utilizing offsite/commercial disposal methods on this site.

Sanitary Facilities

Portable sanitary facilities that comply with COGCC Rules and Regulations will be provided and maintained on the location during the drilling and completion phases of the operation. Because no personnel are on the location for an extended period of time, no city services or sanitary services of any kind will be required or provided after the well begins to produce. A PDC employee or contractor will visit the site every day and will be responsible for picking up and disposing of any debris.

Well Site Restoration

Interim Reclamation for the Denali State 05N67W13 1-23 Pad/Facility will be approximately 8.6 acres. Reclamation will be conducted under company supervision in accordance with COGCC Rules and Regulations. Following drilling operations, all drilling mud and cuttings will be removed from any reserve/retention area using trucks, pumps, and mechanical squeezing with a dozer. The mud and cuttings will be trucked offsite to an approved commercial disposal site, per COGCC regulations. The pad will be backfilled with soils in the reverse order removed and capped with the separated topsoil. Subsoils will be mechanically compacted while backfilling.

All tanks and equipment, lines and roads will be removed from the entire Denali State 05N67W13 1-23 Pad/Facility. All reseeding shall be done with grasses consistent with the Rocky Mountain native mix or other grasses reasonably requested by the surface owner and during planting period suggested by owner. When the area is no longer farmed, the seed mixture will be planted. All surface restoration shall be accomplished and completed to the reasonable satisfaction of the surface owner, as soon as practical

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after installation (weather permitting), and in accordance with regulatory agencies' standards. All site reclamation will be in conformance with the City of Greeley as well as COGCC regulations.

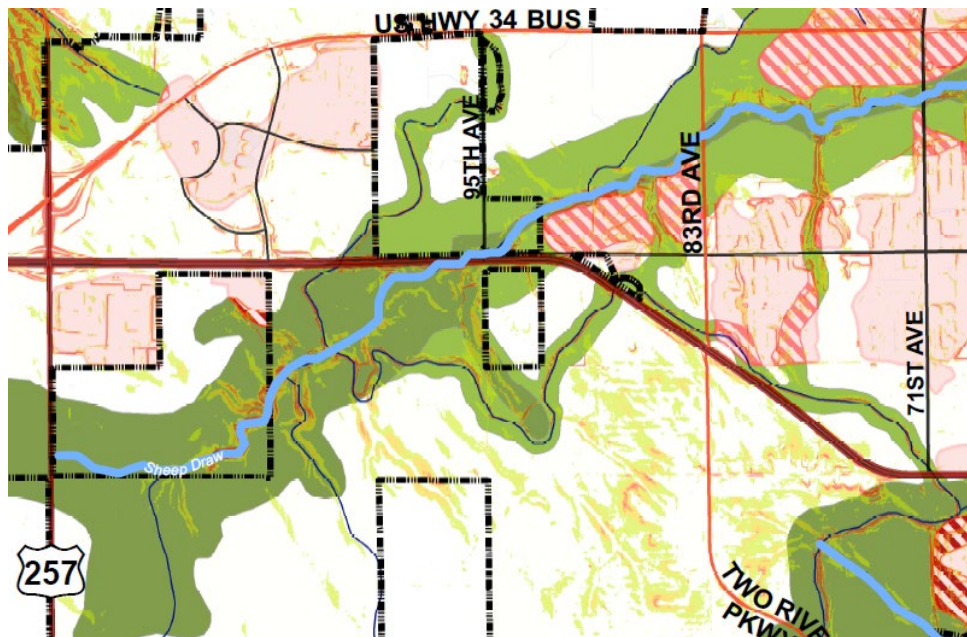
Weed Control

All disturbed areas shall be kept reasonably free of noxious weeds and undesirable species as practicable. When a well is completed for production, all disturbed areas no longer needed will be restored and re-vegetated as soon as practicable. A third party weed control service will be contracted annually, if necessary, to prevent and control the reoccurrence of noxious or excessive weed growth. PDC will drag the lease roads and the production site as needed with a "drag" designed to remove weeds. Weeds that cannot be controlled with this method will be sprayed as needed with a systemic herbicide. Any additional weed control required to maintain the site free of weeds will be implemented if the standard plan is not sufficient. PDC will comply with COGCC Rules and Regulations regarding weed control.

Area of Ecological Significance

PDC has consulted with Colorado Parks and Wildlife (CPW) on the nearby eagle nest and both parties are aware of the nest location. PDC is currently drafting a wildlife mitigation plan that will outline surveys conducted, mitigation efforts and BMPs needed to limit impacts. PDC will follow wildlife guidance documents and continue to engage the CPW during plan development. Approved plans will be included in the Denali State USR. The Denali site is outside of any Area of Ecological Significance.

Imagine Greeley Ecologically Sensitive Areas Map:



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Emergency Response and Fire Protection Plan

A comprehensive and complete Emergency Response Plan will be submitted to the City of Greeley, which is a site-specific review of the risks to structures and land uses in the immediate vicinity, and addresses the risks presented by the proposed facility while considering the setbacks or distances. PDC will comply with all applicable sections of the 2018 International Fire Code, as amended and adopted by the City of Greeley and Greeley Fire Protection District:

Section 5706.1	General	Section 5706.3.2	Waste Control
Section 5706.3	Well Drilling and Operating	Section 5706.3.3	Sumps
Section 5706.3.1	Location	Section 5706.3.4	Prevention of Blowouts
Section 5706.3.1.1	Storage tanks and sources of Ignition	Section 5706.3.5	Storage Tanks
Section 5706.3.1.2	Streets and Railways	Section 5706.3.6	Soundproofing
Section 5706.3.1.3	Buildings	Section 5706.3.7	Signs
COGCC Rule 912	Spills and Releases	Section 5706.3.8	Field Loading Racks

Per the Greeley Fire Department:

- **City of Greeley Code Section 18.56.110: Sound walls or similar acoustical insulating materials shall be of a non-combustible material.**
- Greeley, Colorado – Municipal Code / Title 24- Development Code / Chapter 11.-Supplemental Standards / Sec. 24-1102.c.5.(c) Adequate blowout prevention equipment shall be provided for drilling operations and well servicing operations.
- Enclosed flares shall be utilized during the drilling, completion, recompletion, reworking, production, repair, and maintenance of the pad site.
- Routine fire inspections are required during the different phases of operation and, at a minimum, an annual inspection, upon completion of the wells and production facilities. The Greeley Fire Department will coordinate and schedule these inspections.

The road leading to the Denali State 05N67W13 1-23 Pad/Facility and those contained within the pad will be designed and maintained to support fire apparatus and shall be provided with a surface to accommodate all weather driving capabilities. A circular turnaround shall be provided on site that is capable of allowing the turning around of all fire apparatus.

In addition to the above-referenced rules and regulations, PDC is also subject to COGCC Rules and Regulations pertaining to Fire Prevention and Protection.

PDC has support personnel in the field or on call at all times to provide technical assistance in fire prevention and elimination.

The following individuals may be notified at these numbers:

DESIGNATED OPERATOR
PDC Energy, Inc.

PDC 24 Hour Emergency Hot Line (877) 350-0169
Brian DeRose, Surface Land Supervisor (970) 342-0135

(A) GENERAL INFORMATION

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The purpose of the Emergency Response Plan is to provide procedures to cover emergency conditions that may arise during the development of oil and gas resources. The procedures contain the policies applicable to facility emergencies.

The following information can be vital during emergencies. It may be used by outside agencies as well as company employees and contract labor to help secure a speedy recovery from an emergency situation:

PDC Office Address

PDC Energy, Inc.
1775 Sherman Street, Suite 3000
Denver, Colorado 80203

Landman, Operations Manager, Safety Manager

Brian DeRose, Surface Land Supervisor (970) 342-0135
Darin Spitzer, Surface Landman (970) 459-7766
Wes Hudkins, Production Manager (970) 573-0408
Jason Thron, EH&S Manager (303) 831-3900

Type of Facility

Oil and Gas Production Facility

Location

SESW SECTION 13, TOWNSHIP 5 NORTH, RANGE 67 WEST, 6TH P.M
Weld County, Colorado

The location will be accessed as follows:

Traffic for drilling, completions, flowback, and initial production operations will be routed 50% to the north and 50% to the south from the access point on County Road 25/95th Avenue.

Operator

PDC Energy, Inc.
1775 Sherman Street, Suite 3000
Denver, Colorado 80203
Brian DeRose, Surface Land Supervisor
Cell: (970) 342-0135

Corporate Manager in Charge of Facility

PDC Energy, Inc.
1775 Sherman Street, Suite 3000
Denver, Colorado 80203
Wes Hudkins
(970) 573-0408

Tank and Piping Inspections

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All tanks and above ground piping are visually inspected on a daily basis for leakage, malfunction of seals, and other problems. Inspections of all storage tanks are made by PDC personnel or contractors and reported to its headquarters. All storage tank material and construction comply with API specifications for hydrocarbon storage. All tanks shall be appropriately labeled indicating the material contained within the tank(s).

Spill Containment

Tank berms are steel berm rings and are sized to contain 150% of the volume of the largest tank in the containment area. The inside of the tank berms are lined with impermeable and sealed material to prevent any leaks from leaving the containment. PDC operators or contract operators are equipped with spill cleanup kits for minor spills. Minor and major spills will be immediately reported to the Operations Superintendent and President of PDC in accordance with the SPCC plan. Berms will be inspected on a weekly basis and within forty-eight (48) hours of a precipitation event.

Entrance/Exit Driveways

The access to the Denali State 05N67W13 1-23 Pad/Facility will serve as both the entrance and exit. The fire code official shall have the authority to require an increase in the minimum access widths where they are inadequate for fire or rescue operations.

The access road, with one permanent access point from County Road 25, is 30 feet in width. The lease access road will be constructed of a compacted class 6 road base with a minimum depth of 4 inches at 80% compaction and surfaced so as to provide all-weather driving capabilities. The turnaround for the tank battery will be approximately 30 feet on the north side, 60 feet on the east side, 30 feet on the south side and 60 feet on the west side. These dimensions allow for safe access of tanker trucks and emergency equipment. The access road shall be graded to provide simple drainage from the roadway and allow for cross drainage by means of an adequate culvert pipe. The lease road shall be maintained so as to provide a roadway passable for emergency vehicles and shall be generally rut free. Measures will be taken to control mud on local roadways.

Signs will be posted in accordance with the City of Greeley, the Greeley Fire District, and the COGCC.

Security

All proper warning signs and equipment guards will be installed. At this time there are no plans to have locked security gates. If the need should arise in the future a lockbox with a key will be on location so that the fire district has access in an emergency.

(B) TRAINING

All facility personnel are trained in the operation and maintenance of equipment to prevent or control spills and are versed in the applicable pollution control laws, rules, and regulations. Company vehicles that visit the location will be equipped with shovels and materials necessary to contain spills.

(C) EMERGENCY CONTACT LIST

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Following is a list of PDC personnel and emergency organizations that may be contacted in the event of an emergency occurring at the proposed Denali State 05N67W13 1-23 Pad/Facility.

All emergencies shall be reported immediately to the appropriate Supervisor. In the event the Manager(s) cannot be reached, any of the following may be notified at their office number during normal working hours or at their home/cell number if during other than normal working hours.

<u>Name</u>	<u>Phone</u>
PDC Emergency Hotline	(877) 350-0169 – 24 Hour
Brian DeRose	(970) 342-0135

<u>City and County Agencies</u>	<u>Emergency</u>
Greeley Fire Department Non-Emergency (970) 350-9504	911
Greeley Police Department Non-Emergency (970) 350-9600 To report emergencies, call 911 for fires or spills that cannot be contained by employees.	911
Weld County Office of Emergency Management (970) 304-6540	911
Weld County Sheriff Department Non-Emergency (970) 356-4015	911 - Contact as emergencies dictate.
Tri-County Health Department Office: (303) 220-9200	Product or Wastewater Spill

<u>State Agencies</u>	<u>Emergency</u>
Colorado Oil & Gas Conservation Commission (303) 894-2100	As needed
Colorado Department of Public Health and Environment Office: (303) 377-6326 Emergency: (877) 518-5608	As needed
Division of Oil and Public Safety Office: (303) 318-8547	As needed
Colorado Public Utilities Commission Gas Pipeline Safety Division Office: (303) 894-2851	As needed
Colorado State Highway Patrol	911

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Non-Emergency (970) 506-4999

<u>Federal Agencies</u>	<u>Emergency</u>
Environmental Protection Agency - Region VIII Emergency Response Number: (303) 293-1788 (24 hours)	As needed
National Response Center Emergency Response Number: (800) 424-8802	As needed

(D) EMERGENCY RESPONSE PROCEDURES

PDC has an Emergency Plan. A copy is available at their Headquarters. The Safety Supervisor and the Operations Manager are to assume full responsibility for implementing the Emergency Response Plan. Implementation will depend upon the type of emergency.

(E) CONTINGENCY PROCEDURES/SPCC PLANS

A Spill Prevention Control and Countermeasure (SPCC) Plan is maintained at PDC's Headquarters. This would be referred to if a major product or produced water release occurs.

(F) RELEASE OF INFORMATION

Release of information is the responsibility of PDC's Headquarters.

<u>Name</u>	<u>Office Phone</u>
Brian DeRose	(970) 342-0135