

Exhibit A-11 - Map 1 - Mineral Development Area
ALTERNATIVE LOCATION ANALYSIS RULE 304b MAP 1

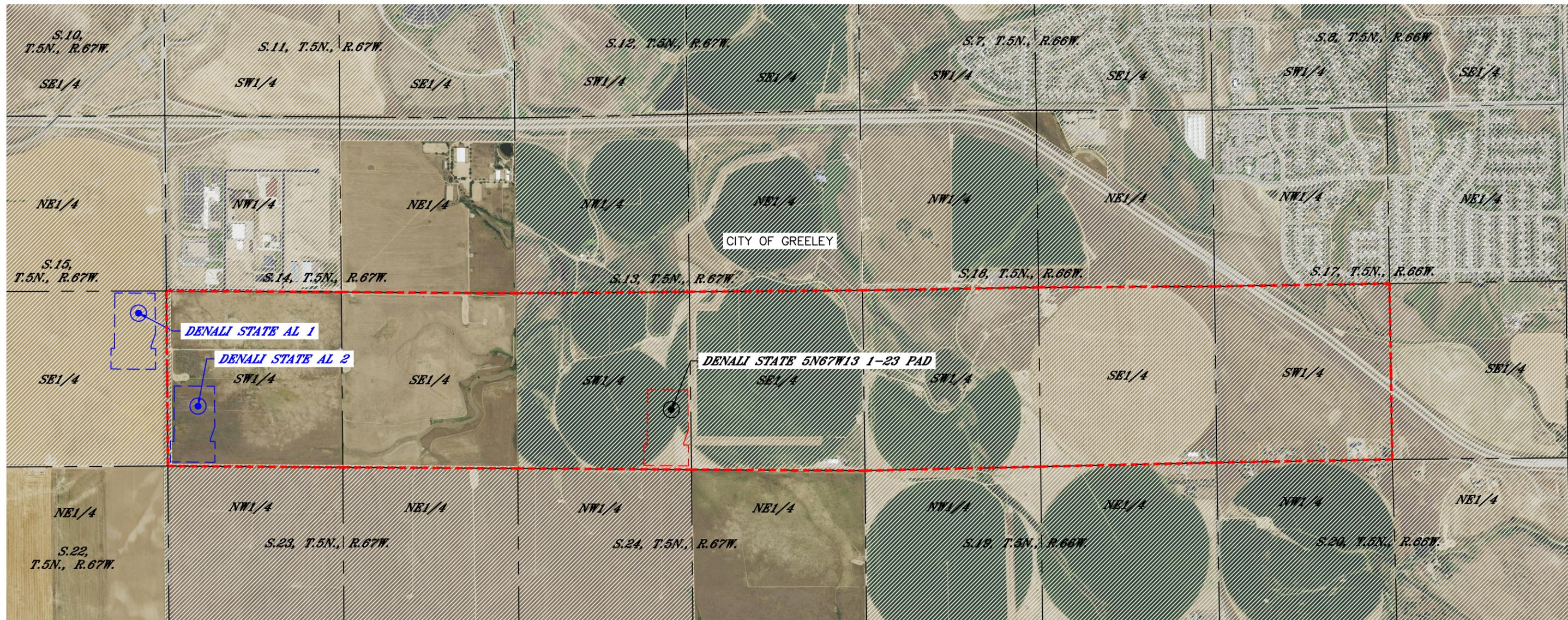
DENALI STATE 5N67W13 1-23 PAD

PDC ENERGY, INC.

OGDP: GUANELLA CAP

2A DOC. NO. 402714182

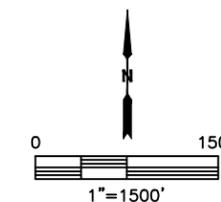
SECTION: 13
TOWNSHIP: 5N
RANGE: 67W
6TH. P.M.
WELD COUNTY, CO



LEGEND

- PROPOSED REFERENCE POINT
- PROPOSED ALTERNATE REFERENCE POINT
- PROPOSED OIL AND GAS LOCATION
- PROPOSED ALTERNATE OIL AND GAS LOCATION
- PROPOSED MINERAL DEVELOPMENT
- JURISDICTIONAL BOUNDARY
- AL ALTERNATE LOCATION

REFERENCE POINT	LATITUDE°	LONGITUDE°
DENALI STATE 5N67W13 1-23 PAD	40.39458	-104.84261
DENALI STATE ALTERNATE 1	40.39871	-104.87134
DENALI STATE ALTERNATE 2	40.39487	-104.86817



NOTE:
THIS MAP IS A COMPILATION OF PUBLICLY AVAILABLE DATA. THE ACCURACY AND COMPLETENESS OF SAID DATA HAS NOT BEEN VERIFIED BY LAT40, INC. EXISTING CONDITIONS MAY DIFFER FROM WHAT IS SHOWN.

DATA SOURCE: WELD COUNTY ASSESSOR, COGCC

DATE: 10/15/2021
PROJECT#: 2021001

Exhibit A-11 - Map 2 - Existing Infrastructure
ALTERNATIVE LOCATION ANALYSIS RULE 304b MAP 2

DENALI STATE 5N67W13 1-23 PAD

PDC ENERGY, INC.

OGDP: GUANELLA CAP

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SECTION: 13
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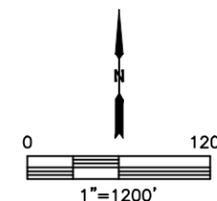
LEGEND

- PROPOSED REFERENCE POINT
- PROPOSED ALTERNATE REFERENCE POINT
- AL ALTERNATE LOCATION
- 2000' BUFFER
- PROPOSED ALTERNATE 2000' BUFFER
- OIL AND GAS LOCATION
- PROPOSED ALTERNATE OIL AND GAS LOCATION
- PARCEL LINE
- DISPROPORTIONATELY IMPACTED COMMUNITY
- PRODUCING OIL & GAS WELL
- SHUT IN OIL & GAS WELL
- TEMPORARY ABANDONED OIL & GAS WELL
- INJECTION WELL
- PLUGGED AND ABANDONED OIL & GAS WELL
- DRILLED AND ABANDONED OIL & GAS WELL
- ★ DRILLING OIL & GAS WELL
- WATER WELL (GIS DATA)
- LOCATION ACTIVE
- ▲ WELD OIL AND GAS LOCATION ASSESSMENT (WOGLA)

REFERENCE POINT	LATITUDE°	LONGITUDE°
DENALI STATE 5N67W13 1-23 PAD	40.39458	-104.84261
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DATA SOURCE: WELD COUNTY ASSESSOR, COGCC

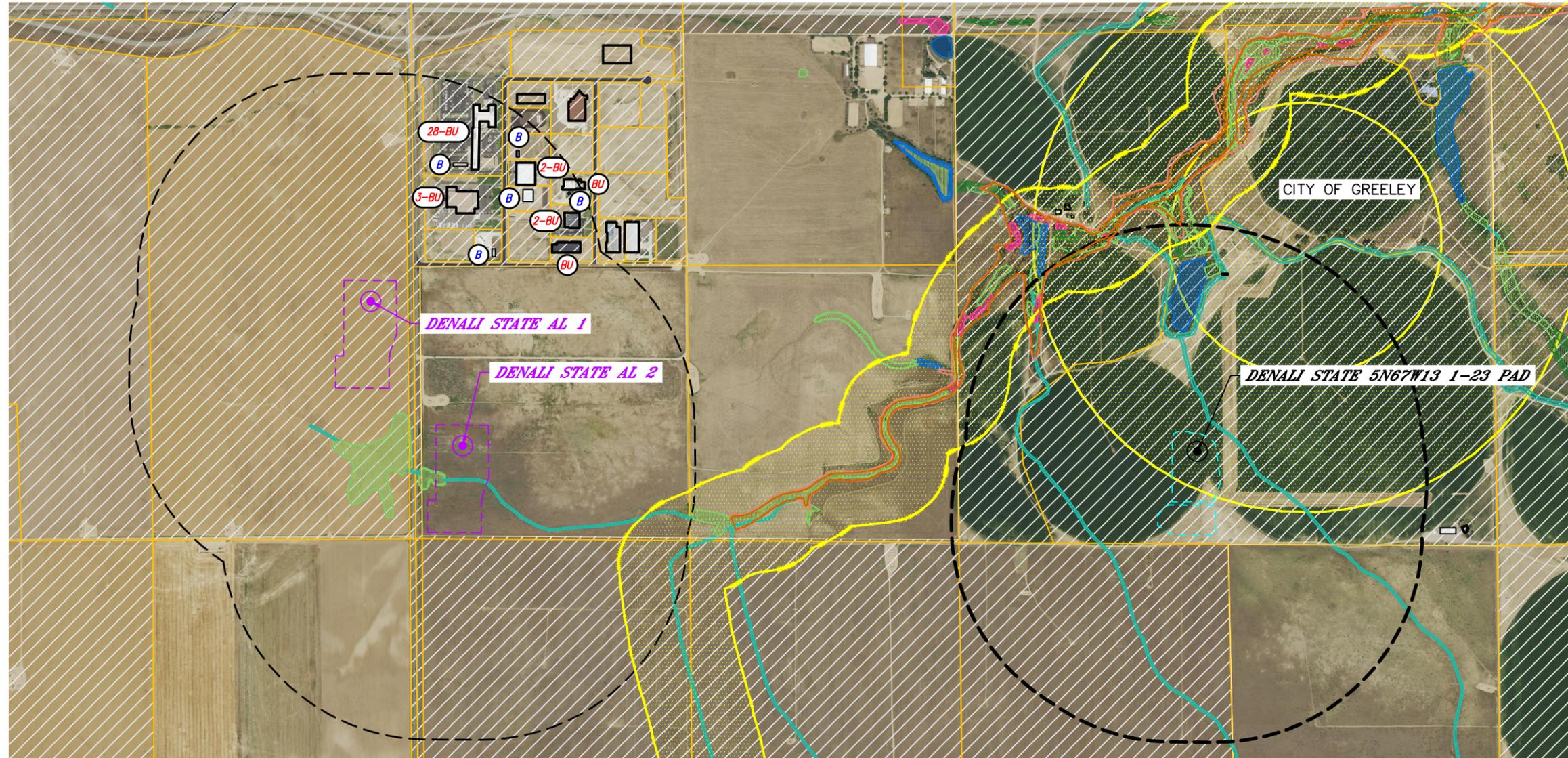


DATE: 6/16/2022
PROJECT#: 2021001

Exhibit A-11 - Map 3 - RBUs, Child, School & Health Facilities, DIC, HPH and Water Features ALTERNATIVE LOCATION ANALYSIS RULE 304b MAP 3

DENALI STATE 5N67W13 1-23 PAD
PDC ENERGY, INC.
OGDP: GUANELLA CAP
2A DOC. NO. 402714182

SECTION: 13
TOWNSHIP: 5N
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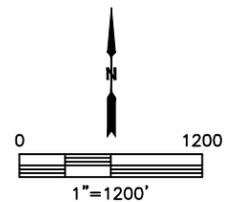
REFERENCE POINT	LATITUDE°	LONGITUDE°
DENALI STATE 5N67W13 1-23 PAD	40.39458	-104.84261
DENALI STATE ALTERNATE 1	40.39871	-104.87134
DENALI STATE ALTERNATE 2	40.39487	-104.86817

- PROPOSED REFERENCE POINT
- PROPOSED ALTERNATE REFERENCE POINT
- AL ALTERNATE LOCATION
- WORKING PAD SURFACE
- PROPOSED ALTERNATE WORKING PAD SURFACE
- 2000' BUFFER
- PROPOSED ALTERNATE 2000' BUFFER
- PARCEL LINE

LEGEND

- BUILDING
- BUILDING UNIT
- RESIDENTIAL BUILDING UNIT
- HIGH OCCUPANCY BUILDING UNIT
- SCHOOL FACILITY
- CHILD CARE
- DESIGNATED OUTSIDE ACTIVITY AREA
- PUBLIC WATER SYSTEM SUPPLY WELL

- RIPARIAN
- FRESHWATER POND
- RIVERINE
- FRESHWATER EMERGENT WETLAND
- FRESHWATER FORESTED SHRUB WETLAND
- RULE 411.a.(1)
- FLOOD ZONE AE
- FLOOD ZONE X-.2% ANNUAL CHANCE OF FLOOD
- FLOOD ZONE AE FLOODWAY
- HIGH PRIORITY HABITAT
- DISPROPORTIONATELY IMPACTED COMMUNITY
- MUNICIPALITY LIMITS



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DATA SOURCE: WELD COUNTY ASSESSOR, COGCC

DATE: 6/16/2022
PROJECT#: 2021001

Exhibit A-11 Data Sheet			
DENALI STATE			
	Proposed Location		
	Latitude	Longitude	
Reference Point	40.39458	-104.84261	
304.b.(2).C.ii --> 304.b.(3).A			
Distance to nearest Cultural Feature:	Distance	Direction	
Building	2173	SE	
Building Unit	2378	SE	
Residential Building Unit	2378	SE	
HOBUs	5280+		
Designated Outside Activity Area	5280+		
Public Road	2664	E	
Above-ground Utility	1811	N	
Railroad	5280+		
Property Line	84	S	
School Facility	5280+		
Child Care Center	5280+		
Boundary of DIC	5280+		
RBU, HOBUs, or School Facility within a Disproportionately Impacted Community within 2000 feet	5280+		
304.b.(2).C.ii --> 304.b.(3).B			
Number of cultural features within:	0-500 feet	501-1,000 feet	1,001-2,000 feet
BUs	0	0	0
RBUs	0	0	0
HOBUs	0	0	0
School Properties	0	0	0
School Facilities	0	0	0
DOAAs	0	0	0
304.b.(2).C.iii.aa			
304.b.(2).B Criteria Met (include as many lines as needed, and provide a brief description of each criteria met)	iv. Within 2,000 feet of a municipality		
304.b.(2).C.iii.bb			
Location within DIC or within 2000' of DIC? YES or NO	NO		
	Distance	Direction	
If YES, distance to nearest BU:	N/A	N/A	
If YES, distance to nearest HOBUs:	N/A	N/A	
If YES, distance to nearest School:	N/A	N/A	
If YES, describe community outreach efforts per 304.b.(2).C.iii	N/A		
If YES, the number and description of existing Oil and Gas Locations, Facilities, and Wells within 2000' of any RBU, HOBUs, or School within 2000' of the proposed location	Number	Description	
	N/A	N/A	
304.b.(2).C.iii.cc			
Distance to municipal or county boundaries within 2000', and names of the Proximate Local Government(s)	Distance	Name	
	135	Weld County	

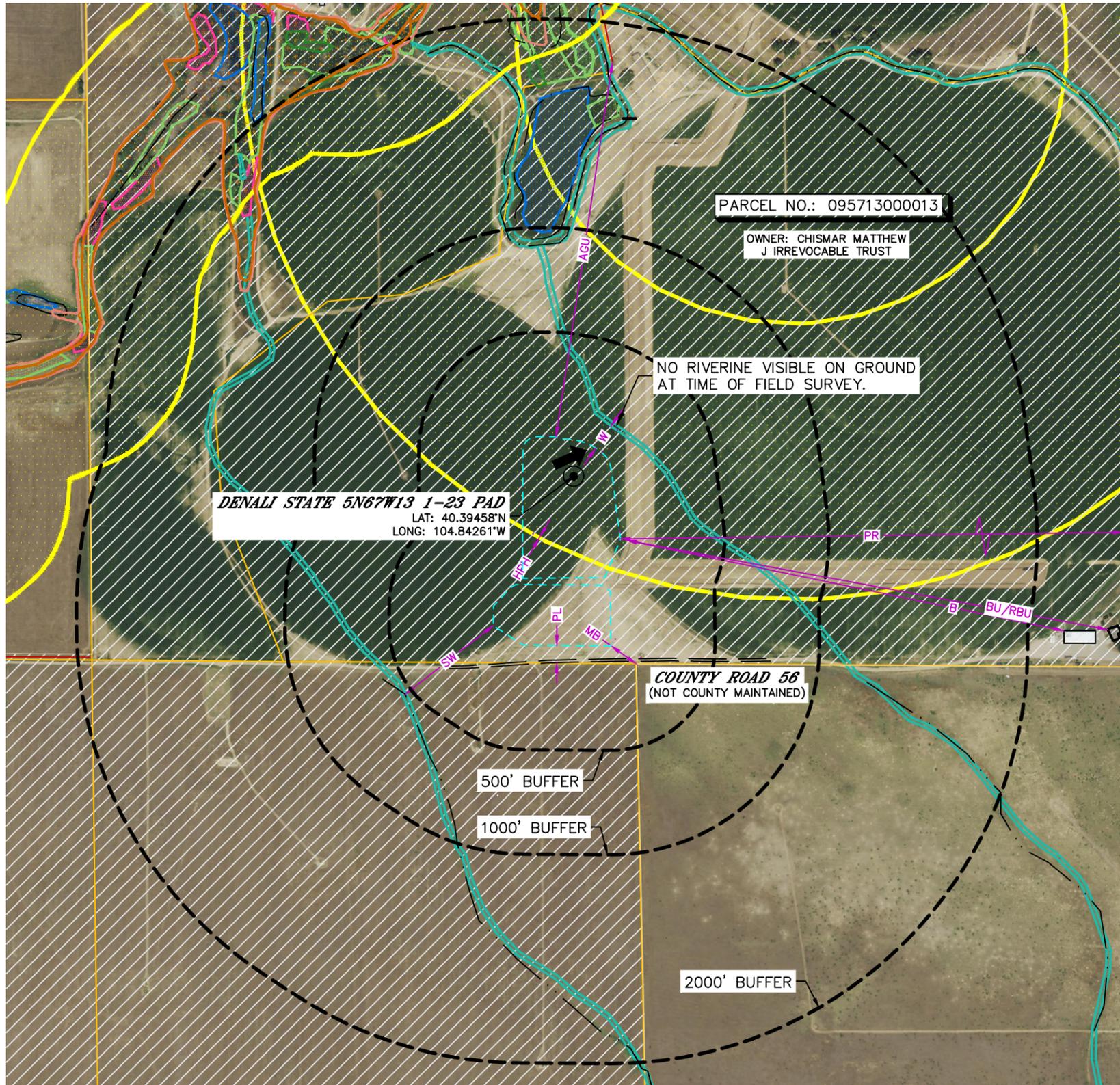
Exhibit A-11 Data Sheet			
DENALI STATE			
	Proposed Location		
304.b.(2).C.iii.dd			
Relevant Local Government Name	CITY OF GREELEY		
RLG land use or zoning designation	H-A		
RLG permitting process	USR		
Status of RLG permit if applicable	Not started		
304.b.(2).C.iii.ee			
Current Land Use	CROP LAND		
Plans for future use at Location	CROP LAND		
Plans for future use proximal to location	CROP LAND		
304.b.(2).C.iii.ff			
Distance to nearest wetland, surface water (Waters of the State), surface water supply area, or PWS supply well (Type III aquifer or GUDI)	Distance	Direction	Type
	128	NE	RIVERINE
304.b.(2).C.iii.gg			
Distance to nearest HPH	Distance	Direction	Description
	INSIDE LOCATION		BALD EAGLE ACTIVE NEST SITE - HALF MILE BUFFER
304.b.(2).C.iii.hh			
Anticipated method of RTC	SURFACE USE AGREEMENT EXECUTED		
Surface Ownership	FEE - CHISMAR MATTHEW J IRREVOCABLE TRUST		
Additional Information			
604.a considerations	NA		
	604.b.(2) - within CAP		
604.b considerations			
Any variance or other relief required	NA		
Tier Classification	II-A		
The following items should be answered in a written narrative format and attached to			
Description of potential impacts to health, safety, welfare, wildlife, and the environment related to the development of this location	See Narrative		
Description of advantages and disadvantages associated with this location	See Narrative		
Permitting considerations for this location	See Narrative		
Conditions or factors that make the location unavailable	See Narrative		
Any other considerations	See Narrative		

Exhibit A-11 - PROPOSED LOCATION ALTERNATIVE LOCATION ANALYSIS DATA MAP

DENALI STATE 5N67W13 1-23 PAD
PDC ENERGY, INC.

OGDP: GUANELLA CAP
2A DOC. NO. 402714182

SECTION: 13
TOWNSHIP: 5N
RANGE: 67W
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	MEASURED FROM THE NEAREST	EDGE OF WORKING PAD
B	BUILDING	±2173' SE
BU	BUILDING UNIT	±2378' SE
RBU	RESIDENTIAL BUILDING UNIT	±2378' SE
HOBU	HIGH OCCUPANCY BUILDING UNIT	5280'+
DOAA	DESIGNATED OUTSIDE ACTIVITY AREA	5280'+
PR	PUBLIC ROAD (COUNTY ROAD 25)	±2664' E
AGU	ABOVE GROUND UTILITY	±1811' NE
RR	RAILROAD	5280'+
PL	PROPERTY LINE	±84' S
S	SCHOOL FACILITY	5280'+
CC	CHILD CARE CENTER	5280'+
DIC	DISPROPORTIONATELY IMPACTED COMMUNITY BOUNDARY	5280'+
BU/RBU /DIC	BU/RBU WITHIN DISPROPORTIONATELY IMPACTED COMMUNITY BOUNDARY	5280'+
MB	MUNICIPALITY BOUNDARY	±150' SE
CB	COUNTY BOUNDARY	5280'+
W	WETLANDS (USGS WETLANDS MAPPER)	±128' NE
SW	SURFACE WATER	±535' SW
PW	PUBLIC WATER SYSTEM SUPPLY WELL	5280'+
HPH	HIGH PRIORITY HABITAT	INSIDE LOCATION

WORKING PAD RADII	0-500 FEET	501-1000 FEET	1001-2000 FEET
BUILDING	0	0	0
BUILDING UNIT	0	0	0
RESIDENTIAL BUILDING UNIT	0	0	0
HIGH OCCUPANCY BUILDING UNIT	0	0	0
SCHOOL PROPERTIES	0	0	0
SCHOOL FACILITIES	0	0	0
DESIGNATED OUTDOOR ACTIVITY AREA	0	0	0

LEGEND

- PRELIMINARY WORKING PAD SURFACE
- OIL AND GAS LOCATION
- BUFFER
- PARCEL LINE
- PROPOSED REFERENCE POINT
- BUILDING
- BUILDING UNIT
- RESIDENTIAL BUILDING UNIT
- HIGH OCCUPANCY BUILDING UNIT
- SCHOOL FACILITY
- CHILD CARE
- DESIGNATED OUTSIDE ACTIVITY AREA
- PUBLIC WATER SYSTEM SUPPLY WELL
- WETLANDS OTHER
- RIPARIAN
- FRESHWATER POND
- RIVERINE
- FRESHWATER EMERGENT WETLAND
- FRESHWATER FORESTED SHRUB WETLAND
- RULE 411.a.(1)
- FLOOD ZONE AE
- FLOOD ZONE X--.2% ANNUAL CHANCE OF FLOOD
- FLOOD ZONE AE FLOODWAY
- HIGH PRIORITY HABITAT
- DISPROPORTIONATELY IMPACTED COMMUNITY
- MUNICIPALITY LIMITS
- DOWNGRADIENT (USGS QUAD MAP)

ZONING: GREELEY-H-A
LAND USE: CROP LAND
FLOOD ZONE: X

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DATA SOURCE: WELD COUNTY ASSESSOR, COGCC, ACS, USFWS, ECOS, CPW, FEMA, CBHP

DATE: 6/16/2022
PROJECT#: 2021001

EXHIBIT A-11

Denali State 5N67W13 1-23 Pad

Denali State ALA Narrative

Proposed Location

This proposed location is situated within the municipality of the City of Greeley on center pivot irrigated farmland, which is both the current and future land use. This proposed location has an executed Surface Use Agreement.

Description of potential impacts to health, safety, welfare, wildlife, and the environment related to the development of this location:

There are no residential building units (RBU) within 2,000 feet. The closest RBU is 2,378 feet southeast of the working pad surface and is owned by the surface owner. Midstream equipment is currently in place to pipe out liquids and provide water for completions operations. Gas is planned to be piped out and Xcel grid power is planned to be connected to the location for drilling, completions, and production. Noise and light will be mitigated by installation of sound walls to the north, south, east, and west of the proposed location during drilling and completion operations.

Maps from the National Wetland Inventory show a riverine running almost parallel to the location on the west and east sides. PDC secured the services of a third-party firm to assess the location. Documentation was received advising that there is not a riverine present.

PDC has conducted an on-site evaluation with the CPW to address a Bald Eagle nest that was identified north of the proposed location and is committed to working within the designated operation windows that the CPW provides to PDC in to effectively mitigate any potential impacts to the nest. PDC has proactively hired a third-party environmental consultant to monitor the nest this season to document the nest's activity. Additionally, the proposed access has been relocated to be outside of the HPH.

Description of advantages and disadvantages associated with this location:

- **Advantages:**
 - Step out distance is technically and operationally feasible without risk of an extended operational duration; maximizes drilling and completion efficiencies and provides the ability to capture the minerals effectively
 - No RBUs within 2,000 feet
 - No BUs within 2,000 feet
 - The proposed site is outside of a no surface occupancy, wetlands and floodplain
 - PDC has an executed Surface Use Agreement with the Surface Owners on the subject lands
 - To be connected via electric, pipeline for oil and gas, and temporary pipeline for fresh water
 - Not located in a Disproportionately Impacted Community
 - Not located near a childcare or school facility
- **Disadvantages:**
 - The proposed site is partially located inside of 1/2 mile buffer of HPH (bald eagle nest)

EXHIBIT A-11

Denali State 5N67W13 1-23 Pad

Permitting considerations for this location:

- A Use by Special Review will need to be obtained with the City of Greeley
- PDC is submitting the proposed oil and gas location through COGCC via Comprehensive Area Plan 314.b.(5).
- An approved Access Permit will need to be obtained from the City of Greeley
- A signed Surface Use Agreement has been obtained from the Surface Owners
- [PDC will work with CPW to obtain any necessary waivers.](#)

Conditions or factors that make the location unavailable:

- None

EXHIBIT A-11

Denali State 5N67W13 1-23 Pad

Alternate Location 1 (currently ALA 2 on maps)

The current and future land use for this location is non-irrigated cropland. There is a freshwater emergent wetland 264 feet southeast of the working pad surface. There are three Building Units within 1,000 feet and 34 BUs within 2,000 feet. This property is technically unfeasible for drilling and completing wells as 3.5 mile laterals exceed PDC's internal threshold.

Alternate Location 2 (currently ALA 3 on maps)

The current and future land use for this location is dry land. There is one Building Unit within 2,000 feet. There is a High Priority Habitat 1,356 feet southeast of the working pad surface. There are freshwater emergent wetlands inside the location. This property is technically unfeasible for drilling and completing wells as 3.5 mile laterals exceed PDC's internal threshold.

EXHIBIT A-11

Denali State 5N67W13 1-23 Pad

Denali State Pad 1-23 ALA Narrative Summary

- After a thorough evaluation of potential impacts via the Alternative Location Analysis process, PDC has selected the proposed location over the alternate locations as it is preferred based on the minimization of adverse impacts to receptors. There are no preferable or technically feasible alternative locations within or adjacent to the mineral development area that more successfully avoid potential adverse impacts to human, environmental, and wildlife receptors.
- The Proposed Location was selected because it allows PDC to capture 1,140 acres of minerals spanning 3.5 miles (1.5 mile laterals drilling west and 2 mile laterals drilling east) from one central location. The location is greater than a mile from the nearest Disproportionately Impacted community. There are no RBUs or BUs within 2,000 feet of the location, with the closest RBU being the Surface Owner's located approximately 2,378 feet to the southeast. PDC has obtained a Surface Use Agreement and will be utilizing an existing access point and road that currently runs close to the location. Due to the proximity to the existing midstream facilities, connecting to existing oil pipeline infrastructure will be convenient and a minimization of surface impacts, eliminating the need to construct new longer lines. There is also existing Xcel grid power that will be connected to this location. The proposed Denali State pad development will allow PDC to safely plug and reclaim up to 23 existing wells in the project area, returning a net of approximately 26.9 acres to the community and surrounding landowners.
- Alternate Location 1 was not selected due to being technically unfeasible for drilling and completing wells as 3.5 mile laterals exceed PDC's internal threshold.
- Alternate Location 2 was not selected due to having freshwater emergent wetlands inside the location and being technically unfeasible for drilling and completing wells as 3.5 mile laterals exceed PDC's internal threshold.