

**WATER PLAN**

Date: November 16, 2021

Location: WR OGDP 4 / Wells Ranch CDP / AB32-01 Pad

Legal Description: NENE Section 32, Township 7 North, Range 64 West, Weld County, Colorado



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**Article I. Introduction**

*Facility Information*

This document provides site-specific information for the AB32-01 Pad within the WR OGD 4 of the Wells Ranch CDP. The information in this document relates specifically to the time during the construction, drilling, completion, and production of the five (5) proposed horizontal wells on this location.

The proposed location is rangeland southwest of the intersection of WCR 53 and WCR 76. The Pad will be in NENE Section 32, Township 7 North, Range 64 West, zoned agricultural within the Weld County Near-Urban Planning Area. A 1041 WOGLA was filed for the CDP as 1041WOGLA19-0042 on 12/10/2019 and recorded at reception #4556398 on 1/8/2020. Site-specific supplemental information will be filed with Weld County prior to commencement of operations.

The proposed AB32-01 Pad oil and gas location disturbance will be 9.8 acres, reduced to 2.4 after interim reclamation. The proposed working pad surface will be 5.6 acres. The Pad is on Parcel 071132100003 owned by Dean B and Tuesday L Westerman. The location is currently used for farming.

The AB32-01 Pad will produce to the proposed AB28-13 Multi. Equipment at the AB32-01 Pad will include wells and meter/sales buildings.

Phase	Duration (days)	Estimated Start Date
Construction	60 days	2nd Quarter (April) 2025
Drilling	40 days	3rd Quarter (August) 2025
Completion	40 days	4th Quarter (October) 2025
Flowback	N/A	Flowing back directly to permanent facility
Production	30 years	1st Quarter (January) 2026
Interim Reclamation	60 days	1st Quarter (March) 2026

**Article II. Water Sources**

*Source Details*

Ahead of completion activity, construction and drilling activities will utilize additional but significantly smaller water volumes. Typically, these water volumes are supplied independently of the completion water sources and may be trucked to location. Estimated water usage per DP is two to three acre-feet. Various water sources may be used for construction and drilling, sources will be selected based upon limiting trucking distance and minimizing adverse impacts related to construction and drilling activities. Table 2 -1 presents potential drilling and construction water sources and locations.

**Table 2-1 Construction and Drilling Sources:**

<u>Source Name</u>	<u>Source Type</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Est. Volume BBLs</u>	<u>Transport Method</u>
Triton Water Resources, LLC	Groundwater	40.2990°N	104.7524°W	7,500	Trucked
City of Greeley	Municipal	various hydrants		2,000	Trucked
Fortress	Groundwater	40.1904°N	104.4846°W	2,000	Trucked

Priority Area 1 initial development activity will be in the southwest portion of the Wells Ranch CDP and will build off water infrastructure utilized previously. Existing surface water sources will be the primary supply for Priority Area 1 due to proximity. Temporary and permanent infrastructure to convey water sources as needed for development activities. Priority Area 1 contains OGDP 4.

All freshwater for downhole frac operations will be moved by pipeline to minimize risks to public health, safety, environment, and wildlife. Planned water sources and volumes, coordinates of sources are summarized below in Table 2-2, including the planned source and volume of all surface water and Groundwater to be used and the coordinates of the planned source of water.

**Table 2-2 Completion Sources:**

<u>Source Name</u>	<u>Source Type</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Est. Used Volume (Ac. Ft.)</u>	<u>Transport Method</u>
New Cache La Poudre Irrigation Company	Surface Water	40.4650°N	104.5622°W	150	Piped
River Bluffs Ventures, LLC	Surface Water	40.4104°N	104.5309°W	180	Piped
Wells Ranch LLLP	Groundwater	40.4774°N	104.4268°W	60	Piped

Below are the seller's name and address of water sources planned for Priority 1 area completions.

New Cache La Poudre Irrigation Company Contact Person  
Dale Trowbridge  
33040 Railroad Ave  
Lucerne, CO 80646

River Bluffs Ventures, LLC  
Dan Brown  
1927 Wilmington Drive, Suite 101  
Fort Collins, CO 80528

Wells Ranch LLLP  
Jackie Schaefer  
32010 WCR 63  
Gill, CO 80624

### *Water Recycling or Re-Use*

Management of the recycle and reuse of produced water will receive a high level of up-front comprehensive planning. The judicious use of freshwater sourcing can be contemplated years in advance of developing the entire CDP. Similarly, the responsible disposal and recycling of wastewater from oil and gas operations can be planned with flexibility to adopt efficiencies and technologies as they become available during CDP development.

EcoNodes facilities, constructed in advance of and operational ahead of associated well production, will include separation of produced water generated from the connected OGDs. A portion of this produced water may be recycled or reused on location for a portion of the water supply for nearby completion projects. Alternately, produced water may be collected from several EcoNodes and conveyed to a more central location for treatment then returned to the completion location. Development of produced water recycling plan is ongoing and upon finalization will be submitted to the COGCC for review and approval. Estimated produced water recycled water volumes are presented in Table 2- 3.

**Table 2-3 Produced Water Recycle Volumes:**

<u>Source Name</u>	<u>Source Type</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Est. Volume MMBBLs</u>	<u>Transport Method</u>
A12-07 Facility	Prod. Water	40.5008°N	104.4978°W	0.3	Piped
A07-08 Facility	Prod. Water	40.5006°N	104.5879°W	0.4	Piped

There are many potential benefits of produced water recycling. These include, but are not limited to environmental sustainability, operational security and risk mitigation, improved community relations, economic benefit, and industry leadership. Noble is committed to the goal of reducing freshwater use and wastewater disposal. With a robust recycling program, it is possible to simultaneously accomplish both objectives. For every barrel of water that is recycled and reused, one less barrel of water is withdrawn from fresh water sources and one less barrel of water is sent to disposal. However, anticipated produced water volumes generated in the Wells Ranch CDP are not sufficient to meet expected water volumes needed for completions. Noble will continue to focus on a goal of maximizing the volume of produced water recycled and reused to return for downhole frac operations.

All reuse or recycled produced water used within Wells Ranch CDP will be sourced from nearby Noble EcoNodes. No other produced water sources are anticipated for use in recycle or reuse projects.

In addition to any substances that are not permitted to be used in accordance with state or federal regulations in place at the time of drilling operations, the chemicals listed in Table 437-1 will not be utilized in the hydraulic fracturing fluid at the proposed oil and gas locations. Additionally, monitoring of recycled water will be performed to verify that chemical constituent listed in Table 437-1 for which Table 915-1 also provides a standard will be below the Table 915-1 standard, or the unconcentrated naturally occurring background level, whichever is greater.

**Table 2-4 Background Concentrations (per Table 437-1):**

<b>Ingredient Name</b>	<b>CAS #</b>	<b>Table 915-1 Concentration</b>
Benzene	71-43-2	
Lead	7439-92-1	
Mercury	7439-97-6	
Arsenic	740-38-2	
Cadmium	7440-43-9	
Chromium	7440-47-3	
Ethylbenzene	100-41-4	
Xylene	1330-20-7	
1,3,5-trimethylbenzene	108-67-8	
1,4-dioxane	123-91-1	
1-butanol	71-36-3	
2-butoxyethanol	111-76-2	
N,N-dimethylformamide	68-12-2	
2-ethylhexanol	104-76-7	
2-mercaptoethanol	60-24-2	
benzene, 1,1'-oxybis-,tetrapropylene derivatives, sulfonated, sodium salts (BOTS)	119345-04-9	
butyl glycidyl ether	8-6-2426	
Quaternary ammonium compounds, dicoco alkyl dimethyl, chlorides (QAC)	61789-77-3	
Bis hexamethylene triamine penta methylene phosphonic acid (BMPA)	35657-77-3	
Diethylenetriamine penta (methylene- phosphonic acid) (DMPA)	15827-60-8	
FD&C blue no. 1	3844-45-9	
Tetrakis (triethanolaminate) zirconium (IV) (TTZ)	101033-44-7	

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. Temporary or permanent pipeline infrastructure will be used to transport produced water and recycled or reuse water.