

WATER PLAN

Date: November 15, 2021

Location: WR OGD 2 / Wells Ranch CDP / A12-02 Pad

Legal Description: NWNE Section 12, Township 6 North, Range 64 West, 6th P.M., Weld County Colorado



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Article I. Introduction

Location Information

This document provides site-specific information for the A12-02 Pad within the WR OGD 2 of the Wells Ranch CDP. The information in this document relates specifically to the time during the construction, drilling, completion, and production of the seven (7) proposed horizontal wells on this location.

The proposed location is irrigated crop northwest of the intersection of WCR 61 and WCR 70. The Pad will be in the NWNE Section 12, Township 6 North, Range 64 West, 6th P.M., 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 A12-02 Pad oil and gas location disturbance will be 8.30 acres, reduced to 2.4 after interim reclamation. The proposed working pad surface will be 4.9 acres. The Pad is on Parcel 0112100001 owned by Case P. Gabel. The location is currently used for farming.

The A12-02 pad will produce to the proposed A12-07 Facility. Equipment at the A12-02 Pad will include injection pumps, meter buildings, multi-phase flow meters, communication towers, flowline manifolds, a temporary minion tank, and solar skids.

Phase	Duration (days)	Estimated Start Date
Construction	60 days	2 nd Quarter (April) 2024
Drilling	35 days	3 rd Quarter (July) 2024
Completion	35 days	4 th Quarter (October) 2025
Flowback	N/A	Flowing back directly to permanent facility
Production	30 years	4 th Quarter (October) 2025
Interim Reclamation	60 days	1 st Quarter (January) 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. 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	21,800	Trucked
City of Greeley	Municipal	various hydrants		5,900	Trucked
Fortress	Groundwater	40.1904°N	104.4846°W	5,900	Trucked

Triton Water Resources, LLC
Mark Goldstein
145 West Swallow Road, Building B
Fort Collins, Colorado 80525-2500

City of Greeley
Water & Sewer Department
1001 11th Ave St #200
Greeley, CO 80631

Fortress Development Solutions
Duke Hall
3050 67th Ave STE 100
Greeley, CO 80634

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 will be used as needed for development activities. Priority Area 1 contains OGD 2.

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 40.4930 °N	104.5622°W 104.4580°W	380	Piped
River Bluffs Ventures, LLC	Surface Water	40.4104°N	104.5309°W	110	Piped
Wells Ranch LLLP	Groundwater	40.4774°N	104.4268°W	55	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 Volumes

Source Name	Source Type	Latitude	Longitude	<u>Est. Volume</u> <u>MMBBLs</u>	<u>Transport</u> <u>Method</u>
A12-07 Facility	Prod. Water	40.5008°N	104.4978°W	0.2	Piped
A07-08 Facility	Prod. Water	40.5006°N	104.5879°W	0.2	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 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):

<u>Ingredient Name</u>	<u>CAS #</u>	<u>Table 915-1 Concentration</u>
Benzene	71-43-2	5 µg/l
Lead	7439-92-1	
Mercury	7439-97-6	
Arsenic	740-38-2	
Cadmium	7440-43-9	
Chromium	7440-47-3	
Ethylbenzene	100-41-4	700 µg/l
Xylene	1330-20-7	1,400 µg/l
1,3,5-trimethylbenzene	108-67-8	67 µg/l
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.