Ward Petroleum Corporation

E&P Waste Management Plan
Land Application of Water-Bentonitic
Drilling Fluids & Associated Drill Cuttings

This document outlines the operational requirements to be used when applying water-based bentonitic drilling fluids and associated drill cuttings to private spread fields to maintain compliance with COGCC Rule 907.d.(3). These materials are being applied as a beneficial soil amendment.

The spread fields covered under this Waste Management Plan are detailed in Table 1. Only water-based bentonitic drilling fluids and associated drill cuttings generated by Ward Petroleum Corporation will be applied at these sites. No other E&P waste shall be deposited at these sites. Changes to Table 1 will be provided to the COGCC in a Form 4 Sundry Notice.

Mud Disposal: Offsite

Method: Land farming

Transporter: Wise Services, Inc.
Shad Martin
Cell: (970) 576-4817

Spread Fields (Private)

1. Wise Services, Inc. has written authorization from the surface owner for land application of water-based bentonitic drilling fluids and associated drill cuttings from Ward Petroleum Corporation generated materials and incorporation of the material will occur within 10 days of application.

2. A 3 inch maximum lift of water-based bentonitic drilling fluids and associated drill cuttings will be applied utilizing a manure spreader truck and then disced in.

3. Daily tracking tickets will be used and will include the following information:
    a. Name of well where material was generated
    b. Date of transfer of the material from the well to the spread field
    c. Volume of material taken to the spread field
    d. Name of transporter
4. The volume of material transported to the spread field will be tracked to help ensure the 3 inch maximum lift is not exceeded.

5. Ward Petroleum personnel will ensure the material will be incorporated into the soil within 10 days, site and weather conditions permitting.

6. Soil sampling will be conducted following incorporation.
    a. A 4 point composite soil sample will be collected from an interval of 0-8 inches below ground surface (bgs).
    b. At a minimum, soil samples will be analyzed for total petroleum hydrocarbons (TPH-C6-C36), benzene, toluene, ethylbenzene, xylenes (BTEX), electrical conductivity (EC), sodium absorption ratio (SAR), pH, and total metals (excluding boron) to ensure compliance with COGCC Table 910-1.

7. In the event of any Table 910-1 exceedance, a COGCC Form 4 Sundry Notice will be prepared and submitted (along with supporting documentation) to explain the exceedance.

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Table 1
Spread Field Locations

Surface Owner	Legal Description	Directions	COGCC Location #
Joel Konig	NW/4 Sec. 3: T10N-R62W	From the town of Grover travel west on CR-122 approximately 4.5 miles to location.	

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Waste Management Plan

Pursuant to compliance with COGCC Rule 907 the following describes Ward Petroleum Corporation's general plan for handling and disposal of E & P waste, including produced water, frac flow-back water, drill mud, cuttings and tank bottoms.

Produced & Frac Flow-back Water

Produced and flow-back water is stored onsite in compatible containers (e.g. frac tanks and produced water storage tanks). As necessary said water is transported by a licensed transporter to an approved third party disposal well(s) operated by the following companies:

- High Sierra Water Services, LLC
- Apollo
- High Plains

Solid Waste and Tank Bottoms

Contaminated solids waste and tank bottoms will be disposed of at licensed third party area landfills operated by Waste Management. In the incidence of minor site spills resulting in moderately oil contaminated soils; onsite reclamation will be conducted in accordance with Rule 907e.

Water-based Bentonitic Drilling Fluids and Associated Cuttings

Drilling wastes including Bentonitic drilling fluids and associated drill cuttings will be hauled by a licensed third party transporter to be re-used by spreading on COGCC approved land-farms per Rule 907.d; as previously submitted and approved by the COGCC (plan attached).