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#### **Recycling Facility Only**

Type of action: Permit Registration Modification Closure Other (explain)

Be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.

Operator: Cimarex Energy Co	(For multiple operators attach page with information) OGRID #:215099
Address: 220 S. Cheyenne Ave Ste 1000 Tulsa, OK 74	103
Facility or well name (include API# if associated with a well): <u>Vaca Draw SWD</u>	
OCD Permit Number:	_(For new facilities the permit number will be assigned by the district office)
U/L or Qtr/Qtr <u>SE/SE</u> Section <u>21</u>	Township 25S Range 33E County: LEA
Surface Owner: 🛛 Federal 🗌 State 🗌 Private 🗌 Tribal Trust or Indian Allotment	
2.	
<b><u>Recycling Facility</u></b> :	
Location of recycling facility (if applicable): Latitude	<u>32.1106148</u> Longitude <u>-103.5708542</u> NAD83
Proposed Use: Drilling* 🛛 Completion* 🗋 Production* 🗋 Plugging *	
*The re-use of produced water may NOT be used un	til fresh water zones are cased and cemented
Other, requires permit for other uses. Describe use, process, testing, volume of produced water and ensure there will be no adverse impact on	
groundwater or surface water.	
🔀 Fluid Storage	
Above ground tanks 🔲 Activity permi	tted under 19.15.17 NMAC explain type
Activity permitted under 19.15.36 NMA	C explain type: Other explain
Closure Report (required within 60 days of closure completion):	
3.	
Variances:	
Justifications and/or demonstrations that the proposed variance will afford reasonable protection against contamination of fresh water, human health, and the environment.	
Check the below box only if a variance is requested:	
Variance(s): Requests must be submitted to the appropriate division district for consideration of approval. If a Variance is requested, include the variance information on a separate page and attach it to the C-147 as part of the application.	
If a Variance is requested, it must be approv	
Operator Application Certification: I hereby certify that the information and attachments submitted with this application are true, accurate and complete to the best of my knowledge and belief.	
1011	Title: <u>Water Resource Manager: Engineering</u>
	Date: <u>April 23, 2018</u>
e-mail address: <u>rhuizenga@cimarex.com</u>	Telephone: <u>918-295-1700</u>
5. <b>S</b> V	
OCD Representative Signature:	Approval/Registration Date: 6/5/2018
Title: Environmental Specialist	OCD Permit Number: 1RF-30
OCD Conditions	
Additional OCD Conditions on Attachment	
pOY1815638246	fCH1815637898
p011013030240	Oil Conservation Division Page 1 of 1

# Cimarex Energy Co. Produced Water Reuse Plan

### Simple Schematic of PW Reuse by Cimarex



#### **Process Overview**

- Pull water from the water tanks only when it is needed during the fracture treatment.
- Dispose of water in SWD during time water is not needed.
- Only suspended solids will be removed.
  - Cut point will be 25 microns
- TDS will not be conditioned or removed from the water
- Lines flushed and pigged with FW before rigging down of units

# Centrifugal Pump



## Filter Unit

- Produced water is filtered with a 25micron sock filter
- Filters unit is placed in containment
- Roll off bin to store used filters are placed in containment
- Used filters are disposed of at approved land fills



# Containments for Frac Tanks/Filter Unit

- Geomat placed on the ground to prevent punctures of the liner
- Double lined with a minimum of a 40 mil liner & 60 mil liner
- All Frac Tanks that will have Produced Water in them will have containments
- Frac tanks are removed as soon as we stop moving PW to location.



