

Submit within 45 days of well completion	State of New Mexico Energy, Minerals and Natural Resources Oil Conservation Division 1220 S. St Francis Dr. Santa Fe, NM 87505	Revised November 6, 2013				
		1. WELL API NO. 30-025-38208				
		2. Well Name: TRANTULA 3 FEDERAL #003				
		3. Well Number: 003				
HYDRAULIC FRACTURING FLUID DISCLOSURE ☒Original ☐Amendment		4. Surface Hole Location: Unit:I Lot:I Section:3 Township:25S Range:37E Feet from:2310 N/S Line:S Feet from:330 E/W Line:E				
		5. Bottom Hole Location: Unit:I Lot:I Section:3 Township:25S Range:37E Feet from:2310 N/S Line:S Feet from:330 E/W Line:E				
		6. latitude: longitude: 32.1583913469426 - 103.143292758129				
		7. County: Lea				
8. Operator Name and Address: VANGUARD PERMIAN, LLC 5847 San Felipe, Suite 3000 Houston 77057		9. OGRID: 258350	10. Phone Number: 832-327-2252			
11. Last Fracture Date: 10/22/2013 Frac Performed by: CUDD		12. Production Type: O				
13. Pool Code(s): 34200		14. Gross Fractured Interval: Confidential				
15. True Vertical Depth (TVD): 6,499 ft		16. Total Volume of Fluid Pumped: 54,303 gals				
17. Total Volume of Re-Use Water Pumped: N/A		18. Percent of Re-Use Water in Fluid Pumped: Not Disclosed				
19. HYDRAULIC FLUID COMPOSITION AND CONCENTRATION:						
Trade Name	Supplier	Purpose	Ingredients	(CAS #) Chemical Abstract Service #	Maximum Ingredient Concentration in Additive (% by mass)	Maximum Ingredient Concentration in HF Fluid (% by mass)
Water		Carrier / Base Fluid		7732-18-5	100%	81.78918%
Sand		Proppant	Silicon Dioxide	14808-60-7	100%	10.32791%
B-15	Water Science Tech	Biocide	Tetrakis (hydroxymethyl) phosphonium sulfate	55566-30-8	20%	0.00164%
15% Hydrochloric Acid	Reagent	Scale Dissolver	Water	7732-18-5	80%	0.00657%
			37% Hydrochloric Acid	7647-01-0	15%	0.60711%
			Water	7732-18-5	85%	3.4403%
I-122	Chemplex,L.C.	Acid Corrosion Inhibitor	Methanol	67-56-1	70%	0.00155%
			Propargyl alcohol	107-19-7	8%	0.00031%
			Alcohol Ethoxylate Surfactants	Trade Secret	30%	0.00117%
			n-olefins	Trade Secret	10%	0.00039%
			thiourea-formaldehyde copolymer	68527-49-1	30%	0.00117%
SG-15G	PIP Technology	Polymer	Guar Gum	9000-30-0	50%	0.21086%
			Petroleum Distillate (Mineral Oil)	64742-47-8	55%	0.23195%
			Bentonite Clay	14808-60-7	2%	0.00843%
			Surfactant	68439-51-0	2%	0.00843%
XL-335	ASK	Crosslinker	Ethylene Glycol	107-21-1	25%	0.02404%
			Potassium Hydroxide	1310-58-3	25%	0.02404%
			Proprietary	Proprietary	25%	0.02404%
			Proprietary	Proprietary	15%	0.01442%
			Proprietary	Proprietary	10%	0.00962%
BC-1	Benchmark	Breaker Catalyst	Triethanolamine	102-71-6	100%	0%
			Diethanolamine	111-42-2	30%	0%
GB-2	Fritz Industries, Inc.	Breaker	Ammonium Persulfate	7727-54-0	99.9%	0.00271%
NE-227	CESI	Non-emulsifier	Isopropanol	67-63-0	15%	0.0123%
			Methanol	67-56-1	15%	0.0123%
			Ethoxylated Nonylphenol	9016-45-9	20%	0.0164%
FE-4	Chemplex, L.C.	Iron Control Additive	Citric Acid Anhydrous	77-92-9	55%	0.01274%
			Water	7732-18-5	55%	0.01274%
Black Ultra	Momentive Specialty Chemicals Inc.	Proppant	Quartz(SiO2)	14808-60-7	100%	3.19764%
			Furfuryl Alcohol	98-00-0	1%	0.03198%
20. I, as Operator, hereby certify that the information shown on this disclosure form is true and complete to the best of my knowledge and belief.						
Signature: <u>Signed Electronically</u> Printed Name: <u>Randall Hicks</u>		Title: <u>Sr Operations Engineer</u>				
Date: <u>1/14/2014</u>						
E-mail Address: <u>rhicks@vnrlc.com</u>						

NMOCD does not require the reporting of information beyond MSDS data as described in 29 CFR 1910.1200. NMOCD does not require the reporting or disclosure of proprietary, trade secret or confidential business information.