

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. 30-015-40465				
		2. Well Name: RAVEN FEDERAL #001				
		3. Well Number: 001				
HYDRAULIC FRACTURING FLUID DISCLOSURE ☒ Original ☐ Amendment		4. Surface Hole Location: Unit: L Lot: 3 Section: 7 Township: 17S Range: 31E Feet from: 2190 N/S Line: S Feet from: 990 E/W Line: W				
		5. Bottom Hole Location: Unit: L Lot: 3 Section: 7 Township: 17S Range: 31E Feet from: 2190 N/S Line: S Feet from: 990 E/W Line: W				
		6. Latitude: Longitude: 32.8477672749222 - 103.913707059512				
		7. County: Eddy				
8. Operator Name and Address: APACHE CORP 303 Veterans Airpark Lane Suite 3000 Midland 79705		9. OGRID: 873	10. Phone Number: 432-818-1168			
11. Last Fracture Date: 8/5/2013 Frac Performed by: Baker Hughes		12. Production Type: O				
13. Pool Code(s): 96831		14. Gross Fractured Interval: 4,655 ft to 5,810 ft				
15. True Vertical Depth (TVD): 5,980 ft		16. Total Volume of Fluid Pumped: 434,532 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	Operator	Carrier	Water	7732-18-5	100%	83.94647%
HCl, 10.1 - 15%	Baker Hughes	Acidizing	Hydrochloric Acid	7647-01-0	15%	0.168%
			Water	7732-18-5	85%	0.95198%
Activator, 330 gal tote	Baker Hughes	Activator	Alcohols, C12-14-Secondary, Ethoxylated	84133-50-6	70%	0.02475%
			Methanol	67-56-1	50%	0.01768%
Superset-W, 330 gl tote	Baker Hughes	Activator	Methanol	67-56-1	50%	0.0087%
			Poly (Oxyethylene) Nonylphenol Ether	9016-45-9	50%	0.0087%
GBW-5	Baker Hughes	Breaker	Ammonium Phosphate	7727-54-0	100%	0.00185%
GBW-15L	Baker Hughes	Breaker	Enzyme solution	Trade Secret	100%	0.03431%
ClayCare, tote	Baker Hughes	Clay Control	Choline Chloride	67-48-1	75%	0.03557%
			Water	7732-18-5	30%	0.01423%
CI-14	Baker Hughes	Corrosion Inhibitor	Fatty Acids	Trade Secret	10%	0.00017%
			Methanol	67-56-1	100%	0.00168%
			Olefin	Trade Secret	5%	8E-05%
			Polyoxyalkylenes	Trade Secret	30%	0.0005%
			Propargyl Alcohol	107-19-7	5%	8E-05%
XLW-10A	Baker Hughes	Crosslinker	Ethylene Glycol	107-21-1	30%	0.03846%
			Sodium Hydroxide	1310-73-2	10%	0.01282%
			Sodium Tetraborate	1330-43-4	30%	0.00963%
			Sodium Tetraborate Decahydrate	1303-96-4	30%	0.02883%
GW-4LDF	Baker Hughes	Gelling Agent	Guar Gum	9000-30-0	60%	0.32423%
			Paraffinic Petroleum Distillate	64742-55-8	60%	0.07477%
			Petroleum Distillate	64742-47-8	60%	0.07477%
			Petroleum Distillate Blend (1)	64742-47-8	70%	0.29103%
			Petroleum Distillate Blend (3)	8042-47-5	70%	0.29103%
			Petroluem Distillate Blend (2)	64742-55-8	70%	0.29103%
Ferrotrol 280L	Baker Hughes	Iron Control	2-Mercaptoethanol	60-24-2	100%	0.00319%
			Ammonium Hydroxide	1336-21-6	5%	0.00016%
			Cupric Chloride	7447-39-4	5%	0.00016%
NE-35, 330 gl tote	Baker Hughes	Non-emulsifier	Mixture of Surfactants	Trade Secret	50%	0.04396%
			Propylene Glycol	57-55-6	30%	0.02638%
Sand, White, 16/30	Baker Hughes	Proppant	Crystalline Silica (Quartz)	14808-60-7	100%	10.42611%
SiberProp, 16/30	Baker Hughes	Proppant	Quartz (SiO2)	14808-60-7	100%	1.86427%
Super LC, 16/30	Baker Hughes	Proppant	Hexamethylenetetramine	100-97-0	0.01%	8E-05%
			P/F Resin	9003-35-4	5%	0.04242%
			Silicon Dioxide (Silica Sand)	14808-60-7	97%	0.82304%
InFlo 250G, 330 gl tote	Baker Hughes	Surfactant	Methanol	67-56-1	30%	0.02527%
			Mixture of Surfactants	Trade Secret	50%	0.04212%
			Water	7732-18-5	30%	0.02527%
Ingredients shown above are subject to 29 CFR 1910			Formaldehyde	50-00-0	0%	1.68E-05%
			Hydrochloric Acid	7647-01-0	0%	1.68E-05%
			Modified Thiorea Polymer	68527-49-1	0%	0.0001176%
			Water	7732-18-5	0%	0.0260421%
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: Signed Electronically Printed Name: Fatima Vasquez Title: Regulatory Tech						
Date: 11/15/2013						
E-mail Address: fatima.vasquez@apachecorp.com						

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.