

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. 30-015-40917				
		2. Well Name: RAVEN FEDERAL #020H				
		3. Well Number: 020H				
HYDRAULIC FRACTURING FLUID DISCLOSURE ☒ Original ☐ Amendment		4. Surface Hole Location: Unit:P Lot:P Section:7 Township:17S Range:31E Feet from:420 N/S Line:S Feet from:180 E/W Line:E				
		5. Bottom Hole Location: Unit:P Lot:P Section:7 Township:17S Range:31E Feet from:420 N/S Line:S Feet from:180 E/W Line:E				
		6. latitude: longitude: 32.8429219599423 -103.901190673297				
		7. County: Eddy				
8. Operator Name and Address: APACHE CORP 303 Veterans Airpark Lane Suite 3000 Midland 79705		9. OGRID: 873	10. Phone Number: 432-818-1062			
11. Last Fracture Date: 11/17/2014 Frac Performed by: Baker Hughes		12. Production Type: O				
13. Pool Code(s): 96831		14. Gross Fractured Interval: 5,965 ft to 9,500 ft				
15. True Vertical Depth (TVD): 5,000 ft		16. Total Volume of Fluid Pumped: 2,275,770 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%	87.9529%
Superset-W, 55 gal drum	Baker Hughes	Activator	Listed with Chemicals in Ingredients	N/A	0%	0.0599%
Alpha 125	Baker Hughes	Biocide	Listed with Chemicals in Ingredients	N/A	0%	0.0319%
ClayCare	Baker Hughes	Clay Control	Listed with Chemicals in Ingredients	N/A	0%	0.0255%
FRW-18	Baker Hughes	Friction Reducer	Listed with Chemicals in Ingredients	N/A	0%	0.0769%
Sand, White, 40/70	Baker Hughes	Proppant	Listed with Chemicals in Ingredients	N/A	0%	4.5512%
Sand, White, 100 mesh	Baker Hughes	Proppant	Listed with Chemicals in Ingredients	N/A	0%	4.5469%
Super LC, 40/70	Baker Hughes	Proppant	Listed with Chemicals in Ingredients	N/A	0%	2.5851%
S-200	Baker Hughes	Surfactant	Listed with Chemicals in Ingredients	N/A	0%	0.1116%
Chemical Ingredients	Baker Hughes	Treatment System	Alcohols, C10-16, ethoxylated propoxylated	69227-22-1	5%	0.005577%
			Alcohols, C12-16, ethoxylated	68551-12-2	2%	0.001537%
			Alcohols, C6-12, ethoxylated propoxylated	68937-66-6	5%	0.005577%
			Alcohols, ethoxylated	68551-12-2	4%	0.004462%
			Amines, unsatd. alkyl, ethoxylated	68155-39-5	2%	0.002231%
			Ammonium Chloride	12125-02-9	3%	0.002305%
			Choline Chloride	67-48-1	75%	0.019129%
			Crystalline Silica (Quartz)	14808-60-7	100%	9.092077%
			Ethanol	64-17-5	10%	0.011154%
			Glutaraldehyde	111-30-8	30%	0.009574%
			Hexamethylenetetramine	100-97-0	0.01%	0.000258%
			Hydrotreated Light Distillate	64742-47-8	30%	0.023049%
			Methanol	67-56-1	50%	0.030002%
			Oleamide DEA	93-83-4	2%	0.001537%
			Phenolic Resin	9003-35-4	5%	0.129168%
			Poly (Oxyethylene) Nonylphenol Ether	9016-45-9	50%	0.029941%
			Poly (acrylamide-co-acrylic acid) partial sodium salt	62649-23-4	30%	0.023049%
			Polyoxyethylene Sorbitan Monooleate	9005-65-6	0.5%	0.000384%
			Silicon Dioxide (Silica Sand)	14808-60-7	97%	2.50586%
			Sodium Chloride	7647-14-5	5%	0.003841%
Sorbitan Monooleate	1338-43-8	0.5%	0.000384%			
Water	7732-18-5	75%	0.145975%			
Ingredients shown above are subject to 29 CFR 1910					0%	0%
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 Analyst			
Date: 3/24/2015						
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.