

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. 30-015-41167				
		2. Well Name: CROW FEDERAL #023H				
		3. Well Number: 023H				
HYDRAULIC FRACTURING FLUID DISCLOSURE ☒ Original ☐ Amendment		4. Surface Hole Location: Unit:E Lot:E Section:9 Township:17S Range:31E Feet from:1650 N/S Line:N Feet from:10 E/W Line:W				
		5. Bottom Hole Location: Unit:E Lot:E Section:9 Township:17S Range:31E Feet from:1650 N/S Line:N Feet from:10 E/W Line:W				
		6. latitude: longitude: 32.8517573372909 - 103.883394173467				
		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: 12/4/2013 Frac Performed by: Pumpco		12. Production Type: O				
13. Pool Code(s): 26770		14. Gross Fractured Interval: 5,857 ft to 10,159 ft				
15. True Vertical Depth (TVD): 5,765 ft		16. Total Volume of Fluid Pumped: 2,925,216 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	Cressent	Carrier/Base Fluid	Water	7732-18-5	100%	87.13651%
Sand (Proppant)	TSS	Proppant	Silica Substrate	14808-60-7	100%	9.27008%
Hydrochloric Acid (15%)	Reagent	Acidizing	Hydrochloric Acid	7647-01-0	15%	0.47404%
AP-Bio-1	Dow Chemical Company	Biocide	Glutaraldehyde	111-30-8	42.5%	0.00938%
			Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides	68424-85-1	7.5%	0.00166%
AP-FR-1	Ashland	Friction Reducer	Ethanol	64-17-5	1%	0.00022%
			Hydrocarbon-aliphatic	25450-40-01	30%	0.00437%
			Fatty alcohol alkoxylate	Proprietary	5%	0.00131%
			Polyacrylate based copolymer	Proprietary	35%	0.02621%
Ferriplex 40	Chemplex	Iron Control	Sodium Hydroxide	1310-73-2	1%	0.00016%
			Sodium Sulfate Anhydrous	7757-82-6	2%	0.00031%
			Trisodium Nitrilotriacetate	5064-31-3	40%	0.00622%
Plexbreak 145	Chemplex	Non-Emulsifier	2-Butoxyethanol	111-76-2	15%	0.00086%
			Cocamide Based Surfactant	Proprietary	10%	0.00057%
			Diethanolamine	111-42-2	3%	0.00017%
Plexhib 256	Chemplex	Acid Inhibitor	Methyl Alcohol	67-56-1	15%	0.00086%
			Propargyl Alcohol	107-19-7	3%	0.00017%
			Thiourea/Formaldehyde Copolymer	68527-49-1	15%	0.00086%
			Polyethoxylated Alcohol Surfactant	68951-67-7	30%	0.00153%
			C-14 to C-16 Alpha Olefins	64743-02-8	30%	0.00153%
AP-Surf-1A	Blentech	Surfactant	Methanol	67-56-1	5%	0.00026%
			Sulfonate	Proprietary	25%	0.02033%
			Alkyl alkoxylate	Proprietary	4%	0.00325%
Claymax	Chemplex	Clay Stabilizer	Choline Chloride	67-48-1	11%	0.00895%
Plexset 730	Chemplex	Proppant Consolidator	Alcohol Ethoxylates	Proprietary	65%	0.11601%
			Methyl Alcohol	67-56-1	60%	0.02252%
50%						
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: 2/6/2014						
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.