

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: 30-015-43277				
		2. Well Name: HAWK 8 N FEDERAL #050				
		3. Well Number: 050				
HYDRAULIC FRACTURING FLUID DISCLOSURE ☒ Original ☐ Amendment		4. Surface Hole Location: Unit:N Lot:N Section:8 Township:18S Range:27E Feet from:455 N/S Line:S Feet from:1980 E/W Line:W				
		5. Bottom Hole Location: Unit:N Lot:N Section:8 Township:18S Range:27E Feet from:455 N/S Line:S Feet from:1980 E/W Line:W				
		6. latitude: 32.7562024 longitude: -104.3021983				
		7. County: Eddy				
8. Operator Name and Address: LIME ROCK RESOURCES II-A, L.P. 1111 Bagby Street Suite 4600 Houston 77002		9. OGRID: 277558	10. Phone Number: 713-292-9517			
11. Last Fracture Date: 9/15/2016 Frac Performed by: CUDD		12. Production Type: O				
13. Pool Code(s): 51120		14. Gross Fractured Interval: 2,894 ft to 46,870 ft				
15. True Vertical Depth (TVD): 5,047 ft		16. Total Volume of Fluid Pumped: 1,482,843 gals				
17. Total Volume of Re-Use Water Pumped: 1,482,843 gals		18. Percent of Re-Use Water in Fluid Pumped: 100%				
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%	89.50708%
Sand		Proppant	Silicon Dioxide	14808-60-7	100%	9.97079%
B-15	Brenntag	Biocide	Tetrakis (hydroxymethyl) phosphonium sulfate	55566-30-8	20%	0.00162%
			Water	7732-18-5	80%	0.00647%
B-24	Lubrizol	Biocide	2,2 Dibromo-3- Nitrilopropionamide	10222-01-2	100%	8E-05%
FR-601	SNF	Friction Reducer	Copolymer of acrylamide and sodium acrylate	25987-30-8	10%	6E-05%
			Isoparaffinic Solvent	64742-47-8	10%	6E-05%
			Water	7732-18-5	60%	0.00038%
			Nonylphenol	9016-45-9	10%	6E-05%
			Sorbitan Monooleate	1338-43-8	10%	6E-05%
15% Hydrochloric Acid	Reagent	Scale Dissolver	37% Hydrochloric Acid	7647-01-0	15%	0.05839%
			Water	7732-18-5	85%	0.3309%
I-112	Chemplex, L.C.	Acid Corrosion Inhibitor	Methanol	67-56-1	49.6%	0.0003%
			Propargyl Alcohol	107-19-7	4%	2E-05%
FE-6	Multiple Suppliers	Iron Control Additive	Acetic Acid	Mixture	85%	0.00163%
			Methanol	67-56-1	5%	0.0001%
FR-900C	SNF	Friction Reducer	Proprietary Polyacrylamide Copolymer	Proprietary	33%	0.0317%
			Isoparaffinic Solvent	64742-47-8	26%	0.02497%
			Water	7732-18-5	42%	0.04034%
			Ethylene Glycol	107-21-1	4%	0.00384%
			Surfactant Blend	Proprietary	6%	0.00576%
NE-227	Ace Completions	Non-emulsifier	Proprietary	NA	15%	5E-05%
			Poly (oxy-1,2-ethanediyl), alpha hexyl-omega-hydroxy-	31726-34-8	5%	2E-05%
			Isotridecanol, ethoxylated	9043-30-5	5%	2E-05%
			Alcohol	68609-68-7	5%	2E-05%
			Solvent Naptha (Petroleum), Heavy Aromatic	64742-94-5	1%	0%
			Water	7732-18-5	90%	0.00033%
SI-625	Ace Completions	Scale Inhibitor	Diethylenetriamine penta methy phosphoric acid sodium salts	22042-96-2	20%	0.00502%
			Potassium Hydroxide solution	1310-58-3	2%	0.0005%
			Water	7732-18-5	90%	0.02259%
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: Mike Pippin		Title: Consultant				
Date: 9/25/2016						
E-mail Address: mike@pippinllc.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.