

**State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505**

1. WELL API NO. 30-015-43216
2. Well Name: HAWK 9 G FEDERAL #019
3. Well Number: 019
4. Surface Hole Location: Unit:G Lot:G Section:9 Township:18S Range:27E Feet from:2275 N/S Line:N Feet from:2295 E/W Line:E
5. Bottom Hole Location: Unit:G Lot:G Section:9 Township:18S Range:27E Feet from:2275 N/S Line:N Feet from:2295 E/W Line:E
6. latitude: 32.7631847 longitude: -104.2818634
7. County: Eddy

**HYDRAULIC FRACTURING FLUID
DISCLOSURE**

Original
 Amendment

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: 9/14/2016 Frac Performed by: CUDD	12. Production Type: O	
13. Pool Code(s): 51120	14. Gross Fractured Interval: 3,130 ft to 4,900 ft	
15. True Vertical Depth (TVD): 5,200 ft	16. Total Volume of Fluid Pumped: 1,452,897 gals	
17. Total Volume of Re-Use Water Pumped: 1,452,897 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%	89.5789%
Sand		Proppant	Silicon Dioxide	14808-60-7	100%	9.89136%
B-15	Brenntag	Biocide	Tetrakis (hydroxymethyl) phosphonium sulfate	55566-30-8	20%	0.00208%
B-24	Lubrizol	Biocide	Water	7732-18-5	80%	0.00833%
15% Hydrochloric Acid	Reagent	Scale Dissolver	2,2 Dibromo-3-Nitripropionamide	10222-01-2	100%	0.00012%
I-112	Chemplex, L.C.	Acid Corrosion Inhibitor	37% Hydrochloric Acid	7647-01-0	15%	0.05965%
FE-6	Multiple Suppliers	Iron Control Additive	Water	7732-18-5	85%	0.33799%
FR-900C	SNF	Friction Reducer	Methanol	67-56-1	49.6%	0.00031%
NE-227	Ace Completions	Non-emulsifier	Propargyl Alcohol	107-19-7	4%	2E-05%
SI-625	Ace Completions	Scale Inhibitor	Acetic Acid	Mixture	85%	0.00167%
			Methanol	67-56-1	5%	0.0001%
			Proprietary Polyacrylamide Copolymer	Proprietary	33%	0.0316%
			Isoparaffinic Solvent	64742-47-8	26%	0.0249%
			Water	7732-18-5	42%	0.04022%
			Ethylene Glycol	107-21-1	4%	0.00383%
			Surfactant Blend	Proprietary	6%	0.00575%
			Proprietary	NA	15%	6E-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%
			Diethylenetriamine penta methy phosphoric acid sodium salts	22042-96-2	20%	0.00457%
			Potassium Hydroxide solution	1310-58-3	2%	0.00046%
			Water	7732-18-5	90%	0.02057%

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

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