

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				
HYDRAULIC FRACTURING FLUID DISCLOSURE ☒ Original ☐ Amendment		1. WELL API NO: 30-015-40783				
		2. Well Name: LOGAN 2C STATE #004				
		3. Well Number: 004				
		4. Surface Hole Location: Unit:C Lot:3 Section:2 Township:18S Range:27E Feet from:990 N/S Line:N Feet from:1500 E/W Line:W				
		5. Bottom Hole Location: Unit:C Lot:3 Section:2 Township:18S Range:27E Feet from:990 N/S Line:N Feet from:1500 E/W Line:W				
		6. latitude: longitude: 32.7806435 -104.2529602				
		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: 8/12/2016 Frac Performed by: CUDD		12. Production Type: O				
13. Pool Code(s): 96836		14. Gross Fractured Interval: 3,170 ft to 3,458 ft				
15. True Vertical Depth (TVD): 4,776 ft		16. Total Volume of Fluid Pumped: 290,304 gals				
17. Total Volume of Re-Use Water Pumped: 290,304 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)
SAND	CUDD	PROPANT	SILICON DIOXIDE	14808-60-7	100%	10.44423%
B-15	WATER SCIENCE TECH	BIOCIDE	TETRAKIS PHOSPHONIUM SULFATE	55566-30-8	20%	0.00188%
B-24	WEATHERFORK	BIOCIDE	2,2-DIBROMO-3-NITRILOPROPIONAMIDE	10222-01-2	100%	0.00059%
FR-601	SNF	FRICTION REDUCER	COPOLYMER OF ACRYLAMIDE & SODIUM ACRYLATE	25987-30-8	10%	0.00956%
			ISOPARAFFINIC SOLVENT	64742-47-8	10%	0.00956%
			NONYLPHENOL	9016-45-9	10%	0.00956%
			SORBITAN MONOOLEATE	1338-43-8	10%	0.00956%
15% HCL	REAGENT	ACIDIZING	37% HYDROCHLORIC ACID	7647-01-0	15%	0.07462%
I-112	CHEMPLEX, L.C.	ACID CORROSION INHIBITOR	METHANOL	67-56-1	49.6%	0.00038%
			PROPARGYL ALCOHOL	107-19-7	4%	3E-05%
NE-227	CESI	NON EMULSIFIER	ISOPROPANOL	67-63-0	15%	9E-05%
			METHANOL	67-56-1	15%	9E-05%
			ETHOXYLATED NONYLPHENOL	9016-45-9	20%	0.00012%
FE-6	CHEMPLEX, L.C.	IRON CONTROL	ACETIC ACID		85%	0.00222%
			METHANOL	67-56-1	5%	0.00013%
SI-625	KELTECH	SCALE INHIBITOR	METHANOL	67-56-1	19.9%	0.00381%
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: 9/11/2016						
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.