

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: 30-043-21159							
		2. Well Name: LOGOS #011							
		3. Well Number: 011							
HYDRAULIC FRACTURING FLUID DISCLOSURE ☒ Original ☐ Amendment		4. Surface Hole Location: Unit:K Lot:K Section:6 Township:22N Range:05W Feet from:2075 N/S Line:S Feet from:1730 E/W Line:W							
		5. Bottom Hole Location: Unit:K Lot:K Section:6 Township:22N Range:05W Feet from:2075 N/S Line:S Feet from:1730 E/W Line:W							
		6. Latitude: 36.16491 Longitude: -107.40543							
		7. County: Sandoval							
8. Operator Name and Address: LOGOS OPERATING, LLC 4001 N. Butler, Bldg 7101 Farmington 87401		9. OGRID: 289408	10. Phone Number: 832-794-1355						
11. Last Fracture Date: 11/22/2013 Frac Performed by: Baker Hughes		12. Production Type: O							
13. Pool Code(s): 97989		14. Gross Fractured Interval: 4,990 ft to 6,150 ft							
15. True Vertical Depth (TVD): 6,325 ft		16. Total Volume of Fluid Pumped: 839,122 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%	88.16141%			
HCl, 10.1 - 15%	Baker Hughes	Acidizing	Hydrochloric Acid	7647-01-0	15%	0.18273%			
Alpha 1427	Baker Hughes	Biocide	Water	7732-18-5	85%	1.03546%			
			Didecyl Dimethyl Ammonium Chloride	7173-51-5	10%	0.00633%			
			Ethanol	64-17-5	5%	0.00316%			
			Glutaraldehyde	111-30-8	30%	0.01899%			
			Quaternary Ammonium Compound	68424-85-1	5%	0.00316%			
GBW-5	Baker Hughes	Breaker	Ammonium persulphate	7727-54-0	100%	0.00914%			
ClayCare, ClayTreat-2C, 330 gl tote	Baker Hughes	Clay Control	Choline Chloride	67-48-1	75%	0.0662%			
Cl-27	Baker Hughes	Corrosion Inhibitor	Water	7732-18-5	30%	0.02648%			
			Fatty Acids	Trade Secret	30%	0.00084%			
			Methanol	67-56-1	60%	0.00168%			
			Olefin	Trade Secret	5%	0.00014%			
			Polyoxyalkylenes	Trade Secret	30%	0.00084%			
			Propargyl Alcohol	107-19-7	10%	0.00028%			
			Thiourea Polymer	68527-49-1	30%	0.00084%			
CorrSorb 3600, 25 lb pail	Baker Hughes	Corrosion Inhibitor	Acid Phosphate Ester	9046-01-9	10%	0.00079%			
			Crystalline Silica: Quartz	14808-60-7	1%	8E-05%			
			Ethylene Glycol	107-21-1	1%	8E-05%			
			Quaternary Ammonium Compound	61789-71-7	30%	0.00236%			
			FAW-22	Baker Hughes	Foamer	Alkyl Sulfate (1 of 3)	Trade Secret	1%	0.00057%
						Alkyl Sulfate (2 of 3)	Trade Secret	1%	0.00057%
Alkyl Sulfate (3 of 3)	Trade Secret	1%				0.00057%			
Ammonium Alkyl Ether Sulfate	Trade Secret	10%				0.0057%			
Isopropanol	67-63-0	30%				0.0171%			
MaxPerm-20A, 265 gallon tote	Baker Hughes	Friction Reducer	Sodium Sulfonate	68439-57-6	30%	0.0171%			
			Oxyalkylated Alcohol	Trade Secret	5%	0.00138%			
Ferrotrol 300L (Totes)	Baker Hughes	Iron Control	Petroleum Distillates	64742-47-8	30%	0.0083%			
			Polyacrylate	Trade Secret	60%	0.01661%			
			Sodium Chloride	7647-14-5	3%	0.00083%			
Nitrogen	Baker Hughes	Nitrogen	Citric Acid	77-92-9	60%	0.00397%			
NE-900, tote	Baker Hughes	Non-emulsifier	Liquid Nitrogen	7727-37-9	100%	4.62429%			
			Methanol	67-56-1	30%	0.00031%			
Parasorb 5005, 50 lb bag	Baker Hughes	Paraffin Inhibitor	Nonyl phenyl polyethylene glycol ether	9016-45-9	10%	0.0001%			
			Calcined Diatomaceous Earth	91053-39-3	100%	0.0315%			
			Complex Ester	Trade Secret	30%	0.00945%			
			Crystalline Silica: Quartz (SiO2)	14808-60-7	1%	0.00032%			
			Ethylene-Vinyl Acetate Copolymer	Trade Secret	5%	0.00158%			
			Heavy Aromatic Naphtha	64742-94-5	10%	0.00315%			
			Mineral Oil	8042-47-5	5%	0.00158%			
			Naphthalene	91-20-3	1%	0.00032%			
			Sand, White, 100 mesh	Baker Hughes	Proppant	Crystalline Silica (Quartz)	14808-60-7	100%	0.56704%
			Sand, non-API, 40/70 mesh	Baker Hughes	Proppant	Crystalline Silica (Quartz)	14808-60-7	100%	4.97358%
ScaleSorb 3, (25# pail)	Baker Hughes	Scale Inhibitor	Amino Alkyl Phosphonic Acid	Trade Secret	30%	0.00236%			
			Crystalline Silica: Quartz (SiO2)	14808-60-7	1%	8E-05%			
			Diatomaceous Earth, Calcined	91053-39-3	100%	0.00788%			
			Phosphonic Acid	13598-36-2	1%	8E-05%			
GasFlo G, 330 gal tote	Baker Hughes	Surfactant	Methanol	67-56-1	30%	0.02423%			
			Oxyalkylated Alkylphenol (1)	Trade Secret	10%	0.00808%			
			Oxyalkylated Alkylphenol (2)	Trade Secret	10%	0.00808%			
			Oxyalkylated Amine	Trade Secret	3%	0.00242%			
			Polyoxyalkylene	Trade Secret	10%	0.00808%			
			Copolymer	Trade Secret	0%	0.0004092%			
Ingredients shown above are subject to 29 CFR 1910			Ethoxylated Alcohol	Trade Secret	0%	0.0005701%			
			Ethylene Glycol	107-21-1	0%	0.0005701%			
			Fatty Amide	70851-08-0	0%	0.0005701%			
			Derivative						
			Formaldehyde	50-00-0	0%	0.0005715%			
			Oleate Ester	1338-43-8	0%	0.0008304%			
			Polysorbate	9005-65-6	0%	0.0008304%			
			Sodium Chloride	7647-14-5	0%	0.0005842%			
			Sodium Sulfate	7757-82-6	0%	0.0005701%			
			Water	7732-18-5	0%	0.126304%			
			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: Tamra Sessions Title: Operations Technician						
			Date: 1/29/2014						
E-mail Address: tsessions@logosresourcesilc.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.