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

HYDRAULIC FRACTURING FLUID DISCLOSURE

☒ Original
☐ Amendment

HYDRAULIC FLUID COMPOSITION AND CONCENTRATION:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service #	Maximum Ingredient Concentration in Additive (% by weight)	Maximum Ingredient Concentration in HF Fluid (% by weight)
Fresh Water	Operator				100%	90.1[illegible]%
[illegible]	Halliburton		Hydrochloric acid	[illegible]	15%	0.[illegible]%
[illegible]	Halliburton				100%	0.[illegible]%
[illegible]	Halliburton				100%	0.[illegible]%
[illegible]	Halliburton	Surfactant	Ethoxylated alcohol	[illegible]	5%	0.0[illegible]%
			Methanol	[illegible]	30%	0.00[illegible]%
			Propan-2-ol	[illegible]	30%	0.01[illegible]%
[illegible]	Halliburton	Biocide	Tetrakis (hydroxymethyl) phosphonium sulfate	[illegible]	60%	0.05[illegible]%
[illegible]	Halliburton	Corrosion Inhibitor	Propan-2-ol	[illegible]	30%	0.00[illegible]%
			Methanol	[illegible]	30%	0.00[illegible]%
[illegible]	Halliburton	Scale Inhibitor	Ethylene glycol	[illegible]	30%	0.01[illegible]%
[illegible]	Halliburton	Surfactant	Methanol	[illegible]	15%	0.0[illegible]%
			Ethoxylated nonylphenol	[illegible]	60%	0.0[illegible]%
[illegible]	Halliburton	Gelling Agent	Guar gum	[illegible]	100%	0.[illegible]%
[illegible]	Halliburton	Surfactant	Isopropanol	[illegible]	30%	0.[illegible]%
			Ethoxylated alcohol	[illegible]	30%	0.[illegible]%
			Heavy aromatic petroleum naphtha	[illegible]	30%	0.[illegible]%
[illegible]	Halliburton	Scale Inhibitor	Phosphonic acid	[illegible]	60%	0.[illegible]%
			Diethylenetriamine penta (methylene phosphonic acid) sodium salt	[illegible]	30%	0.[illegible]%
[illegible]	Halliburton	Biocide	Glutaraldehyde	[illegible]	30%	0.[illegible]%
			Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides	[illegible]	5%	0.[illegible]%
			Ethanol	[illegible]	5%	0.[illegible]%
			Glutaraldehyde (pentanedial)	[illegible]	30%	0.[illegible]%
			Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides	[illegible]	5%	0.[illegible]%
			Ethanol	[illegible]	5%	0.[illegible]%
[illegible]	Halliburton	Gelling Agent	Guar gum	[illegible]	100%	0.[illegible]%
[illegible]	Halliburton	Surfactant	Isopropanol	[illegible]	30%	0.[illegible]%
			Ethoxylated alcohol	[illegible]	30%	0.[illegible]%
			Heavy aromatic petroleum naphtha	[illegible]	30%	0.[illegible]%
[illegible]	Halliburton	Scale Inhibitor	Phosphonic acid	[illegible]	60%	0.[illegible]%
			Diethylenetriamine penta (methylene phosphonic acid) sodium salt	[illegible]	30%	0.[illegible]%
[illegible]	Halliburton	Biocide	Glutaraldehyde