

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	7/16/2019
Job End Date:	7/17/2019
State:	Texas
County:	Reagan
API Number:	42-383-40464-00-00
Operator Name:	Sable Permian Resources
Well Name and Number:	University Lands 10 36-01 03HK
Latitude:	31.22996100
Longitude:	-101.56393500
Datum:	NAD27
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	8,655
Total Base Water Volume (gal):	22,091,691
Total Base Non Water Volume:	0



Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
Fresh Water	Operator	Base Fluid					
			Water	7732-18-5	100.00000	87.17963	Density = 8.330
Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	100.00000	0.24391	

Cla-Web(TM) II	Halliburton	Clay Stabilizer					
				Listed Below			
LX-6	HES	Friction Reducer					
				Listed Below			
OptiKleen-WF (TM)	Halliburton	Concentrate					
				Listed Below			
SAND-COMMON WHITE-100 MESH, SSA-2, 100 LB SACK (100002158)	Halliburton	Proppant					
				Listed Below			
SAND-PREMIUM WHITE-40/70, BULK	Halliburton	Proppant					
				Listed Below			
Transcend-350	HES	Surfactant					
				Listed Below			
3rd Party Corr Inh	HES	Corrosion Inhibitor					
				Listed Below			
HCL >10%	Halliburton	Solvent					
				Listed Below			

Items above are Trade Names with the exception of Base Water . Items below are the individual ingredients.							
			Crystalline silica, quartz	14808-60-7	100.00000	12.41979	
			Hydrochloric acid	7647-01-0	30.00000	0.06629	
			Non Hazardous Materials	Proprietary	100.00000	0.06450	
			Ethoxylated alcohols	Proprietary	30.00000	0.02635	
			Chlorine compound	Proprietary	30.00000	0.00688	
			Ammonium compound	Proprietary	30.00000	0.00688	
			Fatty Amine Salt	Proprietary	5.00000	0.00439	
			Sodium perborate tetrahydrate	10486-00-7	100.00000	0.00404	
			Quaternary amine	Proprietary	1.00000	0.00046	
			Methanol	67-56-1	100.00000	0.00035	
			Amine salts	Proprietary	1.00000	0.00025	
			Sodium chloride	7647-14-5	1.00000	0.00023	
			Modified thiourea polymer	Proprietary	30.00000	0.00010	
			Amine	Proprietary	0.10000	0.00002	Denise Tuck, Halliburton, 3000 N. Sam Houston Pkwy E., Houston, TX 77032, 281-871-6226
			Propargyl alcohol	107-19-7	5.00000	0.00002	

* Total Water Volume sources may include various types of water including fresh water, produced water, and recycled water

** Information is based on the maximum potential for concentration and thus the total may be over 100%

*** If you are calculating a percentage of total ingredients do not add the water volume below the green line to the water volume above the green line

Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided.

Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)