

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:	42-383-40465-00-00
Operator Name:	Sable Permian Resources
Well Name and Number:	University Lands 10 36-01 08HK
Latitude:	31.22870600
Longitude:	-101.56519401
Datum:	NAD27
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	8,640
Total Base Water Volume (gal):	19,305,899
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	87.50818	Density = 8.330
Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	100.00000	0.23749	

SAND-COMMON WHITE-100 MESH, SSA-2, 100 LB SACK (100002158)	Halliburton	Proppant					
				Listed Below			
3rd Party Corr Inh	HES	Corrosion Inhibitor					
				Listed Below			
Transcend-350	HES	Surfactant					
				Listed Below			
HCL >10%	Halliburton	Solvent					
				Listed Below			
SAND- PREMIUM WHITE-40/70, BULK	Halliburton	Proppant					
				Listed Below			
Cla-Web(TM) II	Halliburton	Clay Stabilizer					
				Listed Below			
LX-6	HES	Friction Reducer					
				Listed Below			
OptiKleen-WF (TM)	Halliburton	Concentrate					
				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	12.08380	
			Non Hazardous Materials	Proprietary	100.00000	0.07698	
			Hydrochloric acid	7647-01-0	30.00000	0.06516	
			Ethoxylated alcohols	Proprietary	30.00000	0.02619	
			Chlorine compound	Proprietary	30.00000	0.00609	
			Ammonium compound	Proprietary	30.00000	0.00609	
			Sodium perborate tetrahydrate	10486-00-7	100.00000	0.00596	
			Fatty Amine Salt	Proprietary	5.00000	0.00436	
			Quaternary amine	Proprietary	1.00000	0.00041	
			Methanol	67-56-1	100.00000	0.00034	
			Amine salts	Proprietary	1.00000	0.00022	
			Sodium chloride	7647-14-5	1.00000	0.00020	
			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)