

9/7/17 - submitted to fracFocus.

## Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	8/13/2017
Job End Date:	8/16/2017
State:	Texas
County:	Winkler
API Number:	42-495-33830-00-00
Operator Name:	MEWBOURNE OIL COMPANY
Well Name and Number:	UNIVERSITY B20 12-13 W101DD
Latitude:	31.74567400
Longitude:	-103.29758400
Datum:	NAD27
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	0
Total Base Water Volume (gal):	15,642,107
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	89.33690	Density = 8.380
Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	100.00000	0.40172	

FDP-S1239-16	Halliburton	Friction Reducer					
				Listed Below			
SAND-COMMON WHITE-100 MESH, SSA-2, BULK (100003676)	Halliburton	Proppant					
				Listed Below			
HYDROCHLORI C ACID	Halliburton	Solvent					
				Listed Below			
SAND- PREMIUM WHITE-40/70, BULK	Halliburton	Proppant					
				Listed Below			
OptiKleen-WF (TM)	Halliburton	Concentrate					
				Listed Below			
DCA-32003	Halliburton	Wetting Agent					
				Listed Below			
MC B-8614	Halliburton	Biocide					
				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	10.11965	
			Hydrochloric acid	7647-01-0	60.00000	0.21685	

			Methanol	67-56-1	100.00000	0.03717	
			Hydrotreated Light Distillate	64742-47-8	30.00000	0.02965	
			Sodium perborate tetrahydrate	10486-00-7	100.00000	0.01095	
			Glutaraldehyde	111-30-8	30.00000	0.01055	
			Glycerol	56-81-5	10.00000	0.00988	
			Ethoxylated Alcohol	78330-21-9	5.00000	0.00494	
			Alkylbenzene sulfonate compd. with triethanolamine	68584-24-7	10.00000	0.00371	
			Alkylbenzene sulfonate compd. with 2-propanamine	68584-25-8	10.00000	0.00371	
			Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl chlorides	68424-85-1	5.00000	0.00176	
			Benzene, C10-16 alkyl derivatives	68648-87-3	1.00000	0.00037	
			Ethanol	64-17-5	1.00000	0.00035	
			Phosphoric acid	7664-38-2	0.10000	0.00004	

\* 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)