

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	2/14/2017
Job End Date:	2/21/2017
State:	Texas
County:	Loving
API Number:	42-301-33030-00-00
Operator Name:	Anadarko Petroleum Corporation
Well Name and Number:	YOKUM UL UNIT 19-4 3H
Latitude:	31.72169500
Longitude:	-103.44152400
Datum:	NAD27
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	11,686
Total Base Water Volume (gal):	11,316,638
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
WATER	ANADARKO	CARRIER/BASE FLUID					
			WATER	7732-18-5	100.00000	88.39555	
WHITE NORTHERN WHITE SANDS CORP 100 MESH	PUMPCO	PROPPING AGENT					
			CRYSTALLINE SILICA, QUARTZ	14808-60-7	100.00000	11.20144	
15% HCL	PUMPCO	ACID					
			WATER	7732-18-5	91.00000	0.24544	
			HYDROCHLORIC ACID (HYDROGEN CHLORIDE)	7647-01-0	36.00000	0.09710	
PLEXSLICK 957	PUMPCO	FRICTION REDUCER					
			PETROLEUM HYDROTREATED LIGHT DISTILLATE	64742-47-8	20.00000	0.01700	
PAYZONE 845 BCD	CATALYST	BIOCIDE					
			DIDECYL DIMETHYL AMMONIUM CHLORIDE	7173-51-5	52.00000	0.00860	
			ETHANOL	64-17-5	12.00000	0.00198	
PAYZONE 217SI-W	CATALYST	SCALE INHIBITOR					

			METHYL ALCOHOL	67-56-1	15.00000	0.00273
			PHOSPHONATE	Proprietary	15.00000	0.00273
PAYZONE 850 THPS	CATALYST	BIOCIDE				
			TETRAKIS(HYDROXYMETHYL) PHOSPHONIUM SULFATE	55566-30-8	50.00000	0.00427
STIM741 GEL	CATALYST	GELLING AGENT				
			SOLVENT NAPHTHA, PETROLEUM, HEAVY ALIPHATIC	64742-96-7	55.00000	0.00202
			GUAR GUM	9000-30-0	50.00000	0.00184
			ALCOHOL ETHOXYLATE	Proprietary	5.00000	0.00018
CHEMPLEX 4-N-1	PUMPCO	ACID				
			ACETIC ACID	64-19-7	85.00000	0.00116
			METHANOL	67-56-1	10.00000	0.00014
			WATER	7732-18-5	5.00000	0.00007

Ingredients shown above are subject to 29 CFR 1910.1200(i) and appear on Material Safety Data Sheets (MSDS). Ingredients shown below are Non-MSDS.

* Total Water Volume sources may include fresh water, produced water, and/or recycled water

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

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)