

# Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	5/8/2017
Job End Date:	5/15/2017
State:	Texas
County:	Loving
API Number:	42-301-33110-00-00
Operator Name:	Anadarko Petroleum Corporation
Well Name and Number:	YELLOWJACKET UL UNIT 19-3 14H
Latitude:	31.71998400
Longitude:	-103.41540900
Datum:	NAD27
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	11,500
Total Base Water Volume (gal):	13,156,509
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	83.38684	
WHITE NORTHERN WHITE SANDS CORP 100 MESH	HALLIBURTON	PROPPING AGENT					
			CRYSTALLINE SILICA, QUARTZ	14808-60-7	100.00000	10.61830	
NITROGEN	HALLIBURTON	NITROGEN					
			NITROGEN GAS	7727-37-9	100.00000	5.64646	
15% HCL	HALLIBURTON	ACID					
			WATER	7732-18-5	70.00000	0.16881	
			HYDROCHLORIC ACID	7647-01-0	30.00000	0.07235	
FDP-S1239-16	HALLIBURTON	FRICTION REDUCER					
			HYDROTREATED LIGHT PETROLEUM DISTILLATE	Proprietary	30.00000	0.01853	
			ETHOXYLATED ALCOHOLS	Proprietary	5.00000	0.00309	
PAYZONE 845 BCD	CATALYST	BIOCIDE					
			DIDECYL DIMETHYL AMMONIUM CHLORIDE	7173-51-5	52.00000	0.00806	
			ETHANOL	64-17-5	12.00000	0.00186	

PAYZONE 217SI-W	CATALYST	SCALE INHIBITOR					
			PHOSPHONATE	Proprietary	15.00000	0.00256	
			METHYL ALCOHOL	67-56-1	15.00000	0.00256	
PAYZONE 850 THPS	CATALYST	BIOCIDE					
			TETRAKIS(HYDROXYMETHYL) PHOSPHONIUM SULFATE	55566-30-8	50.00000	0.00399	
STIM741 GEL	CATALYST	GELLING AGENT					
			SOLVENT NAPHTHA, PETROLEUM, HEAVY ALIPHATIC	64742-96-7	55.00000	0.00194	
			GUAR GUM	9000-30-0	50.00000	0.00176	
			ALCOHOL ETHOXYLATE	Proprietary	5.00000	0.00018	
FE-1A	HALLIBURTON	IRON CONTROL					
			ACETIC ANHYDRIDE	108-24-7	100.00000	0.00066	
			ACETIC ACID	64-19-7	60.00000	0.00040	
HAI-OS	HALLIBURTON	CORROSION INHIBITOR					
			METHANOL	67-56-1	60.00000	0.00022	
			PROPARGYL ALCOHOL	107-19-7	10.00000	0.00004	
FDP-S1226-15	HALLIBURTON	SURFACTANT					
			ALCOHOLS, C12-13, ETHOXYLATED	66455-14-9	30.00000	0.00013	
			ALCOHOLS, C12-16, ETHOXYLATED	68551-12-2	5.00000	0.00002	

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)