

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	9/3/2018
Job End Date:	9/5/2018
State:	Texas
County:	Winkler
API Number:	42-495-34040-00-00
Operator Name:	Oasis Petroleum
Well Name and Number:	UL 21 YELLOWTAIL 3H
Latitude:	31.71483000
Longitude:	-103.23488000
Datum:	NAD27
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	11,980
Total Base Water Volume (gal):	25,244,378
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	89.98747	Density = 8.340
Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	100.00000	1.01115	

SAND-COMMON WHITE-100 MESH, SSA-2, 100 LB SACK (100002158)	Halliburton	Proppant					
				Listed Below			
BC-140 X2	Halliburton	Initiator					
				Listed Below			
HCL >10%	Halliburton	Solvent					
				Listed Below			
WG-36 GELLING AGENT	Halliburton	Gelling Agent					
				Listed Below			
MC B-8510	Halliburton	Biocide					
				Listed Below			
SP BREAKER	Halliburton	Breaker					
				Listed Below			
HAI-OS ACID INHIBITOR	Halliburton	Corrosion Inhibitor					
				Listed Below			
Transcend-425	Halliburton	Surfactant					
				Listed Below			

OptiKleen-WF (TM)	Halliburton	Concentrate					
				Listed Below			
SAND-PREMIUM WHITE-40/70, BULK	Halliburton	Proppant					
				Listed Below			
MC B-8614	Halliburton	Biocide					
				Listed Below			
LP-65 MC	Halliburton	Scale Inhibitor					
				Listed Below			
Cla-Web(TM) II	Halliburton	Clay Stabilizer					
				Listed Below			
FIGHTR EC-1	Halliburton	Friction Reducer					
				Listed Below			
MC B-8626	Halliburton	Biocide					
				Listed Below			
Excelerate PS-2	Halliburton	Friction Reducer					
				Listed Below			
TRANSCEND-350	Halliburton	Surfactant					

				Listed Below			
FE-1A ACIDIZING COMPOSITION	Halliburton	Additive					
				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	8.73085	
			Hydrochloric acid	7647-01-0	30.00000	0.29785	
			No hazardous substances	Proprietary	100.00000	0.14474	
			Guar gum	9000-30-0	100.00000	0.03456	
			Organic phosphonate	Proprietary	60.00000	0.01253	
			Sodium perborate tetrahydrate	10486-00-7	100.00000	0.01067	
			Ethoxylated alcohols	Proprietary	30.00000	0.00846	
			Ethoxylated fatty acids	Proprietary	30.00000	0.00697	
			Fatty nitrogen derived amides	Proprietary	30.00000	0.00697	
			Hydrotreated light petroleum distillate	Proprietary	30.00000	0.00697	
			Isopropanol	67-63-0	30.00000	0.00697	
			Ammonium chloride	12125-02-9	30.00000	0.00626	
			Ethoxylated alcohol	Proprietary	30.00000	0.00592	
			Monoethanolamine borate	26038-87-9	100.00000	0.00580	
			Glutaraldehyde	111-30-8	30.00000	0.00395	
			Acetic anhydride	108-24-7	100.00000	0.00300	
			Butyl alcohol	71-36-3	10.00000	0.00232	
			Acetic acid	64-19-7	60.00000	0.00180	
			Ethylene glycol	107-21-1	30.00000	0.00174	
			Diammonium phosphate	7783-28-0	5.00000	0.00104	
			Methanol	67-56-1	60.00000	0.00099	
			Inorganic salt	Proprietary	30.00000	0.00081	

			Hydrotreated light petroleum distillate	64742-47-8	30.00000	0.00081	
			Sodium persulfate	7775-27-1	100.00000	0.00070	
			Didecyldimethylammonium chloride	7173-51-5	10.00000	0.00053	
			Fatty acids, tall oil	Proprietary	30.00000	0.00050	
			Modified thiourea polymer	Proprietary	30.00000	0.00050	
			Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides	68424-85-1	5.00000	0.00039	
			Quaternary ammonium compounds, benzyl-C12-C16-alkyldimethyl, chlorides	68424-85-1	7.00000	0.00037	
			Ethanol	64-17-5	5.00000	0.00026	
			Ammonium compound	Proprietary	30.00000	0.00026	
			Chlorine compound	Proprietary	30.00000	0.00026	
			Olefins	Proprietary	5.00000	0.00020	
			Propargyl alcohol	107-19-7	10.00000	0.00017	
			Quaternary amine	Proprietary	1.00000	0.00002	
			Amine salts	Proprietary	1.00000	0.00001	
			Sodium chloride	7647-14-5	1.00000	0.00001	
			2,7-Naphthalenedisulfonic acid, 3-hydroxy-4-[(4-sulfor-1-naphthalenyl)azo] -, trisodium salt	915-67-3	0.10000	0.00001	
			Amine	Proprietary	0.10000	0.00000	Denise Tuck, Halliburton, 3000 N. Sam Houston Pkwy E., Houston, TX 77032, 281-871-6226
			Sodium sulfate	7757-82-6	0.10000	0.00000	
			Dibromoacetonitrile	3252-43-5			

			2,2 Dibromo-3-nitrilopropionamide	10222-01-2			
			2,2-Dibromomalonamide	73003-80-2			
			2-Monobromo-3-nitrilopropionamide	1113-55-9			

* 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)

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	9/4/2018
Job End Date:	9/5/2018
State:	Texas
County:	Winkler
API Number:	42-495-34040-00-00
Operator Name:	Oasis Petroleum
Well Name and Number:	UL 21 YELLOWTAIL 2H
Latitude:	31.71483000
Longitude:	-103.23488000
Datum:	NAD27
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	11,783
Total Base Water Volume (gal):	26,350,089
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	90.37723	Density = 8.340
Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	100.00000	0.65559	

LP-65 MC	Halliburton	Scale Inhibitor					
				Listed Below			
MC B-8626	Halliburton	Biocide					
				Listed Below			
MC B-8614	Halliburton	Biocide					
				Listed Below			
HAI-OS ACID INHIBITOR	Halliburton	Corrosion Inhibitor					
				Listed Below			
BC-140 X2	Halliburton	Initiator					
				Listed Below			
AccessFrac LT material	Halliburton	Diverter					
				Listed Below			
FIGHTR EC-1	Halliburton	Friction Reducer					
				Listed Below			
HCL >10%	Halliburton	Solvent					
				Listed Below			
OptiKleen-WF (TM)	Halliburton	Concentrate					

				Listed Below			
TRANSCEND-350	Halliburton	Surfactant					
				Listed Below			
SAND-COMMON WHITE-100 MESH, SSA-2, 100 LB SACK (100002158)	Halliburton	Proppant					
				Listed Below			
TRANSCEND-425	Halliburton	Surfactant					
				Listed Below			
Cla-Web(TM) II	Halliburton	Clay Stabilizer					
				Listed Below			
SAND-PREMIUM WHITE-40/70, BULK	Halliburton	Proppant					
				Listed Below			
WG-36 GELLING AGENT	Halliburton	Gelling Agent					
				Listed Below			
MC B-8510	Halliburton	Biocide					
				Listed Below			
SP BREAKER	Halliburton	Breaker					

				Listed Below			
FE-1A ACIDIZING COMPOSITION	Halliburton	Additive					
				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	8.69385	
			Hydrochloric acid	7647-01-0	30.00000	0.19216	
			N/A	Proprietary	100.00000	0.15391	
			Guar gum	9000-30-0	100.00000	0.03205	
			Organic phosphonate	Proprietary	60.00000	0.01247	
			Sodium perborate tetrahydrate	10486-00-7	100.00000	0.01018	
			Ethoxylated Fatty Acids	Proprietary	30.00000	0.00727	
			Isopropanol	67-63-0	30.00000	0.00727	
			Ethoxylated Alcohols	Proprietary	30.00000	0.00727	
			Fatty nitrogen derived Amides	Proprietary	30.00000	0.00727	
			Hydrotreated Light Petroleum Distillate	Proprietary	30.00000	0.00727	
			Ammonium chloride	12125-02-9	30.00000	0.00624	
			Ethoxylated Alcohol	Proprietary	30.00000	0.00529	
			Monoethanolamine borate	26038-87-9	100.00000	0.00405	
			Glutaraldehyde	111-30-8	30.00000	0.00403	
			Butyl Alcohol	71-36-3	10.00000	0.00242	
			2,2 Dibromo-3- nitrilopropionamide	10222-01-2	30.00000	0.00216	
			Acetic anhydride	108-24-7	100.00000	0.00193	
			Ethylene glycol	107-21-1	30.00000	0.00122	
			Acetic acid	64-19-7	60.00000	0.00116	
			Diammonium phosphate	7783-28-0	5.00000	0.00104	

			Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides	68424-85-1	10.00000	0.00096	
			Methanol	67-56-1	60.00000	0.00064	
			Didecyldimethylammonium chloride	7173-51-5	10.00000	0.00057	
			Sodium persulfate	7775-27-1	100.00000	0.00051	
			Chlorine compound	Proprietary	30.00000	0.00041	
			Ammonium compound	Proprietary	30.00000	0.00041	
			Dibromoacetonitrile	3252-43-5	5.00000	0.00036	
			2-Monobromo-3-nitrilopropionamide	1113-55-9	5.00000	0.00036	
			Fatty acids, tall oil	Proprietary	30.00000	0.00032	
			Modified thiourea polymer	Proprietary	30.00000	0.00032	
			Ethoxylated alcohols	Proprietary	30.00000	0.00032	
			Ethanol	64-17-5	5.00000	0.00028	
			Olefins	Proprietary	5.00000	0.00013	
			Propargyl alcohol	107-19-7	10.00000	0.00011	
			2,2-Dibromomalonamide	73003-80-2	1.00000	0.00007	
			Quaternary amine	Proprietary	1.00000	0.00003	
			Amine salts	Proprietary	1.00000	0.00002	
			Sodium chloride	7647-14-5	1.00000	0.00001	
			Poly(lactic acid)	Proprietary	60.00000	0.00001	
			Poly(lactide) resin	Proprietary	60.00000	0.00001	
			2,7-Naphthalenedisulfonic acid, 3-hydroxy-4-[(4-sulfor-1-naphthalenyl)azo] -, trisodium salt	915-67-3	0.10000	0.00000	
			Amine	Proprietary	0.10000	0.00000	Denise Tuck, Halliburton, 3000 N. Sam Houston Pkwy E., Houston, TX 77032, 281-871-6226
			Sodium sulfate	7757-82-6	0.10000	0.00000	

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