

# Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	7/8/2015
Job End Date:	7/12/2015
State:	Texas
County:	Upton
API Number:	42-461-40088-00-00
Operator Name:	Hunt Oil Company
Well Name and Number:	University 3-35 #1HB
Longitude:	-101.84364980
Latitude:	31.20744795
Datum:	NAD27
Federal/Tribal Well:	NO
True Vertical Depth:	8,400
Total Base Water Volume (gal):	7,692,631
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
Silica Sand	Sanjel	Proppant					
			Crystalline Silica, SiO2	14808-60-7	99.90000	9.81873	
10% HCl	Sanjel	Acid					
			Hydrogen Chloride Anhydrous	7647-01-0	40.00000	0.48718	
WG-2BS	Sanjel	Gellant					
			Guar Gum	9000-30-0	100.00000	0.13142	
WG-2BL	Sanjel	Gellant					
			No hazardous ingredients	NA	100.00000	0.02193	
SCC-1L	Sanjel	Clay Control					
			No hazardous ingredients	NA	100.00000	0.01427	
Citric Acid, 50%	Brenntag	Iron Sequestering Agent					
			Citric Acid	77-92-9	60.00000	0.00827	
AQUICAR DB 20	Dow	Biocide					
			Polyethylene glycol	25322-68-3	54.50000	0.00813	
SI-14W	Sanjel	Scale Inhibitor					
			Phosphoric Acid	Proprietary	40.00000	0.00785	
Citric Acid, 50%	Brenntag	Iron Sequestering Agent					
			Water	7732-18-5	50.00000	0.00689	

SI-14W	Sanjel	Scale Inhibitor					
			Methanol	67-65-1	30.00000	0.00589	
AQUCAR DB 20	Dow	Biocide					
			2,2-Dibromo-3-nitripropionamide	10222-01-2	20.00000	0.00298	
AI-8	Sanjel	Acid Inhibitor					
			Isopropanol	67-63-0	40.00000	0.00091	
LDP-A-0614	Sanjel	Demulsifier					
			2-Ethylhexyl sodium sulphate	126-92-1	70.00000	0.00090	
AI-8	Sanjel	Acid Inhibitor					
			Modified thiorea polymer	Proprietary	30.00000	0.00069	
AI-8	Sanjel	Acid Inhibitor					
			Fatty acids	Proprietary	30.00000	0.00069	
AI-8	Sanjel	Acid Inhibitor					
			Polyoxyalkylenes	Proprietary	30.00000	0.00069	
AQUCAR DB 20	Dow	Biocide					
			Sodium bromide	7647-15-6	4.00000	0.00060	
BX-8L	Sanjel	Crosslinker					
			Boric Acid, sodium salt	1333-73-9	30.00000	0.00047	
AQUCAR DB 20	Dow	Biocide					
			Dibromoacetoneitrile	3252-43-5	3.00000	0.00045	
1% Breaker O	Sanjel	Break Fluid					
			Ammonium persulfate	7727-54-0	1.00000	0.00037	
AI-8	Sanjel	Acid Inhibitor					
			Propargyl alcohol	107-19-7	10.00000	0.00023	
CAS-1	Sanjel	Surfactant - Acid Inhibitor					
			N-Cocoamidopropyl-N,N-dimethyl-N-2-hydroxypropylsulfobetaine	68139-30-0	40.00000	0.00011	
Base-N10	Sanjel	High pH Buffer					
			Sodium Hydroxide	1310-73-2	50.00000	0.00011	
FRW-4	Sanjel	Friction Reducer					
			No hazardous ingredients	NA			
Base-N10	Sanjel	High pH Buffer					
			Sodium Chloride	7647-14-5	2.00000		
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.							
Base Fluid	Operator	Base Fluid					
			Water, other	7732-18-5	100.00000	88.66354	
Other Chemicals	Sanjel	Non-MSDS					
			Polymers	Proprietary			
			Mineral Oil	64742-47-8			
			Water	7732-18-5			
			Choline Chloride	67-48-1			
			Mineral Oil	64742-55-8			

\* 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)