

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	4/27/2014
Job End Date:	5/1/2014
State:	North Dakota
County:	McKenzie
API Number:	33-053-05275-00-00
Operator Name:	Newfield Exploration
Well Name and Number:	Scott 150-99-13-24-4H
Longitude:	-103.28859200
Latitude:	47.81814200
Datum:	NAD83
Federal/Tribal Well:	NO
True Vertical Depth:	11,185
Total Base Water Volume (gal):	2,420,510
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	10.40887	
Ceramic Proppant	Sanjel	Proppant					
			Mullite	1302-93-8	70.00000	3.19719	
Ceramic Proppant	Sanjel	Proppant					
			Cristobalite	14464-46-1	30.00000	1.37022	
Ceramic Proppant	Sanjel	Proppant					
			Silica	7631-86-9	30.00000	1.37022	
WG-2BL	Sanjel	Gellant					
			No hazardous ingredients	NA	100.00000	0.23740	
SCC-1L	Sanjel	Clay Control					
			No hazardous ingredients	NA	100.00000	0.09454	
NE-6	Sanjel	Non-emulsifier					
			Isopropal Alcohol	67-63-0	60.00000	0.04773	
BX-6L	Sanjel	Borate Crosslinker					
			Ethylene Glycol	107-21-1	30.00000	0.04643	
Ceramic Proppant	Sanjel	Proppant					
			Rutile (TiO2)	1317-80-2	1.00000	0.04567	
NE-6	Sanjel	Non-emulsifier					

			Diethylenetriamine Alkylbenzene Sulfate	40139-72-8	30.00000	0.02386	
BX-6L	Sanjel	Borate Crosslinker					
			Boric Acid, sodium salt	13840-56-7	10.00000	0.01548	
Buffer E	Sanjel	High pH Buffer					
			Potassium Carbonate	584-08-7	30.00000	0.01026	
Buffer E	Sanjel	High pH Buffer					
			Potassium Hydroxide	1310-58-3	30.00000	0.01026	
FRW-3	Sanjel	Friction reducer					
			Isoparaffinic Solvent	64742-47-8	40.00000	0.00954	
NE-6	Sanjel	Non-emulsifier					
			Benzene 1-1-oxybis-, tetrapropylene	119345-03-8	10.00000	0.00795	
BX-6L	Sanjel	Borate Crosslinker					
			Sodium Hydroxide	1310-73-2	5.00000	0.00774	
AQUCAR DB 20	Dow	Biocide					
			Polyethylene glycol	25322-68-3	54.50000	0.00626	
5% Breaker-3HT	Sanjel	Break fluid					
			Tert-Butyl Hydroperoxide	75-91-2	5.00000	0.00432	
NE-6	Sanjel	Non-emulsifier					
			Diethylenetriamine	111-40-0	5.00000	0.00398	
NE-6	Sanjel	Non-emulsifier					
			2-Ethylhexanol	104-76-7	5.00000	0.00398	
NE-6	Sanjel	Non-emulsifier					
			Heavy Aromatic Solvent Naphtha	64742-94-5	5.00000	0.00398	
AQUCAR DB 20	Dow	Biocide					
			2,2-Dibromo-3-nitrilopropionamide	10222-01-2	20.00000	0.00230	
FRW-3	Sanjel	Friction reducer					
			Surfactant	68131-40-8	5.00000	0.00119	
NE-6	Sanjel	Non-emulsifier					
			Napthalene	91-20-3	1.00000	0.00080	
AQUCAR DB 20	Dow	Biocide					
			Sodium bromide	7647-15-6	4.00000	0.00046	
AQUCAR DB 20	Dow	Biocide					
			Dibromoacetonitrile	3252-43-5	3.00000	0.00034	
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	84.29103	

* 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)

