

## Hydraulic Fracturing Fluid Product Component Information Disclosure

<b>Last Fracture Date</b>	<b>07/28/2012</b>
<b>State:</b>	<b>California</b>
<b>County:</b>	<b>Kern</b>
<b>API Number:</b>	<b>04-030-46362</b>
<b>Operator Name:</b>	<b>Vintage Prod Of Cal</b>
<b>Well Name and Number:</b>	<b>Jackson &amp; Perkins 27-3H</b>
<b>Longitude:</b>	<b>-119.27327</b>
<b>Latitude:</b>	<b>35.53686</b>
<b>Long/Lat Projection:</b>	<b>NAD27</b>
<b>Production Type:</b>	<b>Oil</b>
<b>True Vertical Depth (TVD):</b>	<b>7,737</b>
<b>Total Water Volume (gal)*:</b>	<b>376,236</b>

### 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	Operator	Carrier	Water	7732-18-5	100.00%	69.76022%	
Alpha 125	Baker Hughes	Biocide	Glutaraldehyde	111-30-8	30.00%	0.00499%	SmartCare Product
Enzyme G-I	Baker Hughes	Breaker	Hemicellulase Enzyme Concentrate	9025-56-3	3.00%	0.00375%	SmartCare Product
			Water	7732-18-5	97.00%	0.12124%	
BC-3	Baker Hughes	Breaker Catalyst	No Hazardous Ingredients	Trade Secret	100.00%	0.01870%	
BF-7L, Tote	Baker Hughes	Buffer	Potassium Carbonate	584-08-7	60.00%	0.08213%	SmartCare Product
			Potassium Hydroxide	1310-58-3	1.00%	0.00137%	
			Water	7732-18-5	60.00%	0.08213%	
BF-7L	Baker Hughes	Buffer	Potassium Carbonate	584-08-7	60.00%	0.18005%	SmartCare Product
			Potassium Hydroxide	1310-58-3	1.00%	0.00300%	
			Water	7732-18-5	60.00%	0.18005%	
XLW-56, 330 gal tote	Baker Hughes	Crosslinker	D-Glucitol	50-70-4	10.00%	0.02064%	
			Glyoxal	107-22-2	30.00%	0.06191%	
			Sodium Hydroxide	1310-73-2	5.00%	0.01032%	
			Sodium Tetraborate	1330-43-4	10.00%	0.02064%	
GLFC-1B	Baker Hughes	Gelling Agent	Alkanes / Alkenes	Multiple	45.00%	0.17464%	
			Guar Gum	9000-30-0	50.00%	0.19405%	
GW-4LBF	Baker Hughes	Gelling Agent	Guar Gum	9000-30-0	60.00%	0.13637%	SmartCare Product
			Paraffinic Petroleum Distillate	64742-55-8	60.00%	0.13637%	

