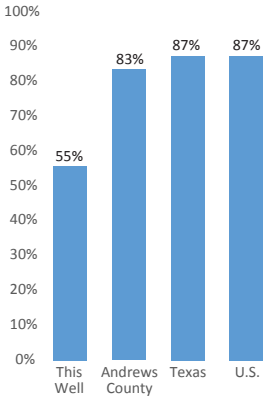
API: 42-003-42885-0000

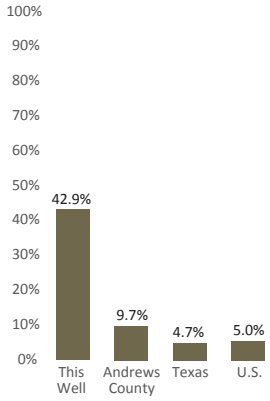
Job Date	8/30/2011
State	Texas
County	Andrews
Operator Name	PDC Energy
Well Name & Number	University Camille 136
Geocoordinates	32.50997, -98.129364
True Vertical Depth	11,105
Total Water Volume	887,625
Original File	<Link to Frac Focus Record>

Frac Type	Not Recognized
Pumper (predicted)	Halliburton
Total Frac Volume (Gal)	1,590,736
Proppant Mass (8.33 lb/gal)	5,693,225.12
Proppant Mass (18.36 lb/gal)	12,548,332.92

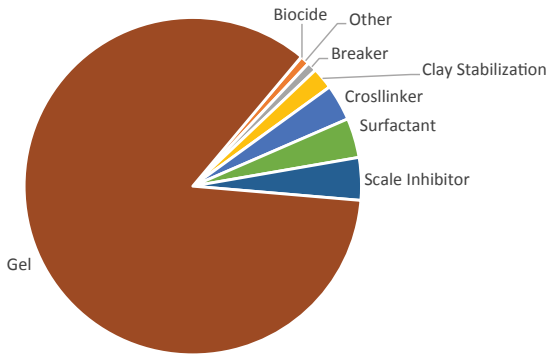
Water Usage



Proppant Usage



Other Purposes



Purpose	Percentage
Biocide	0.00218%
Other	0.00908%
Breaker	0.01133%
Clay Stabilization	0.02567%
Crosllinker	0.04288%
Surfactant	0.04663%
Scale Inhibitor	0.05054%
Gel	1.04700%

Areas of Concern Areas of Major Concern

As Reported	As Reported	Calculated	As Reported & Look Up	As Reported	As Reported, Summed	As Reported & Look Up	As Reported & Look Up	As Reported	Look Up	Look Up	Calculated Analysis		
Tradename (link to more information)	Chemical Supplier (link)	Suppliers w/Significant Marketshare (% of market)	Purpose (Normalized)	Ingredient as Percent of Purpose	Purpose section should add to 100%	Ingredient (Name from CAS #)	CAS Number (Corrected)	Percent of Overall Frac Job	Temperature (Room State)	Chemical Density	Compared To County	Compared To State	Compared to All Fracs
Fresh Water	Halliburton		Fluid	100	100%	Water	772-18-5 (7732-18-5)	99.5075	Liquid	8.3371	67%	64%	64%
Super LC Proppant	Halliburton		Proppant	5	205%	Phenol/formaldehyde resin (Formaldehyde phenol polymer)	9003-35-4	2.3715	Solid		791%	425%	426%
Sand-Premium Brown	Halliburton		Proppant	100		Crystalline silica, quartz	18404-60-7 (14808-60-7)	26.8181	Solid	18.36	440%	915%	857%
Super LC Proppant	Halliburton		Proppant	100		Crystalline silica, quartz	18404-60-7 (14808-60-7)	47.4299	Solid	18.36			
BE-9	Halliburton	Halliburton (89%)	Biocide	10	10%	Trubutyl tetradecyl phosphonium chloride	81741-28-2 (81741-28-8)	0.00389			12%	21%	22%
Optiflo H TE	Halliburton		Breaker	30	130%	Crystalline silica, quartz	14808-60-7	0.00466	Solid	21.698			
SP Breaker	Halliburton	Halliburton (77%)	Breaker	100		Sodium persulfate	7775-27-1	0.01555	Solid	20.029	3%	30%	46%
Clayfix 3	Halliburton	Halliburton (43%)	Clay Control (Clay and Shale Stabilization and Control)	30	30%	Sodium chloride	7647-14-5	0.00906	Solid	18.068	0%	4%	4%
Cla-Sta XP	Halliburton	Halliburton (99%)	Clay Stabilizer (Clay and Shale Stabilization and Control)	60	60%	Polyepichlorohydrin, trimethyl amine quaternized (Oxiranemethanaminium, N,N,N-trimethyl-, chloride, homopolymer)	51838-31-4	0.03671			27%	13%	16%
CL-31	Halliburton		Crosslinker	5	190%	Potassium hydroxide	1310-58-3	0.0014	Solid	17.058	3%	3%	2%
CL-22	Halliburton		Crosslinker	5		Methanol	67-56-1	0.00233	Liquid	6.2841	6%	2%	2%
CL-31	Halliburton	Halliburton (57%)	Crosslinker	60		Potassium metaborate (Boric acid (HBO2), potassium salt)	13709-94-9	0.01676	Solid	9.8309	15%	19%	17%
CL-22	Halliburton		Crosslinker	60		Borate salts		0.02799			NA	NA	NA
CL-22	Halliburton		Crosslinker	60		Diesel (Diesel fuels no. 2)	68476-34-6	0.02799			43%	23%	1%

As Reported	As Reported	Calculated	As Reported & Look Up	As Reported	As Reported, Summed	As Reported & Look Up	As Reported & Look Up	As Reported	Look Up	Look Up	Calculated Analysis		
Tradename (link to more information)	Chemical Supplier (link)	Suppliers w/Significant Marketshare (% of market)	Purpose (Normalized)	Ingredient as Percent of Purpose	Purpose section should add to 100%	Ingredient (Name from CAS #)	CAS Number (Corrected)	Percent of Overall Frac Job	Temperature (Room State)	Chemical Density	Compared To County	Compared To State	Compared to All Fracs
WG-36	Halliburton		Gelling Agent	100	100%	Guar Gum	9000-30-0	1.86712	Solid		217%	343%	377%
MO-67	Halliburton		Additive (Not recognized)	30	30%	Sodium hydroxide	1310-73-2	0.01497	Solid	17.776	2%	29%	7%
D-Air-3000L	Halliburton	Schlumberger (67%)	Defoamer (Not recognized)	30	30%	Silica, amorphous precipitated	67762-90-7	0.00122	Solid		11%	35%	40%
Scalechek SCP-2	Halliburton	Halliburton (100%)	Scale Preventer (Scale Inhibitor)	100	100%	Glassy calcium magnesium phosphate (Glass, oxide, chemicals)	65997-17-3	0.09013	Solid	9.1799	171%	2580%	84%
Losurf-200D	Halliburton	Halliburton (86%)	Non-ionic Surfactant (Surfactant)	1		1,2,4 Trimethylbenzene	95-63-6	0.0008	Liquid	7.2522	23%	1%	3%
Losurf-200D	Halliburton	Halliburton (63%)	Non-ionic Surfactant (Surfactant)	5		Naphthalene	91-20-3	0.00412	Solid	8.6542	26%	17%	19%
Losurf-200D	Halliburton	Halliburton (86%)	Non-ionic Surfactant (Surfactant)	5	101%	Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-omega-hydroxy-b ranched (Polyethylene glycol mono(branched p-nonylphenyl) ether)	127087-87-0	0.00412	Liquid	8.6792	9%	31%	18%
Losurf-200D	Halliburton	Halliburton (63%)	Non-ionic Surfactant (Surfactant)	30		Heavy aromatic petroleum naphtha	64742-94-5	0.02471	Liquid		82%	540%	43%
Losurf-200D	Halliburton	Halliburton (54%)	Non-ionic Surfactant (Surfactant)	60		Ethanol	64-17-5	0.04941	Liquid	6.5094	1%	26%	25%
							Should add to 100 >>	178.33					