

# Hydraulic Fracturing Fluid Product Component Information Disclosure

|                            |                                 |
|----------------------------|---------------------------------|
| Fracture Date              | 9/15/2011                       |
| State:                     | California                      |
| County:                    | Los Angeles                     |
| API Number:                | 0403726720                      |
| Operator Name:             | Plains Exploration & Production |
| Well Name and Number:      | VIC 1-330                       |
| Longitude:                 | -118.379139976                  |
| Latitude:                  | 34.006457093                    |
| Long/Lat Projection:       | NAD83                           |
| Production Type:           | Oil                             |
| True Vertical Depth (TVD): | 8,030                           |
| Total Water Volume (gal)*: | 168,210                         |

## 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        |
|-------------------------------------|-------------|------------------|---|--|--|--|-----------------|
| 7% KCL Water                        | Operator    |                  |   |  | 100.00%  | 86.77644%  | Density = 8.700 |
| SAND - PREMIUM WHITE                | Halliburton | Proppant         | Crystalline Silica, Quartz  | 14808-60-7                               | 100.00%  | 3.70605%   |                 |
| PRC SAND                            | Halliburton | Proppant         | Crystalline Silica, Quartz  | 14808-60-7                               | 100.00%  | 8.59803%   |                 |
|                                     |             |                  | Hexamethylenetetramine  | 1009-7-0                                 | 2.00%  | 0.17196%   |                 |
|                                     |             |                  | Phenol / Formaldehyde Resin   | 900303-35-4                              | 5.00%  | 0.42990%   |                 |
| SSA-2                               | Halliburton | Sand             | Crystalline Silica, Quartz  | 14808-60-7                               | 100.00%  | 0.35578%   |                 |
| FR-66                               | Halliburton | Friction Reducer | Hydrotreated Light Petroleum Distillate                                       | 64742-47-8                               | 30.00%   | 0.01335%   |                 |
| LOSURF-300M™                        | Halliburton | Surfactant       | 1,2,4 Trimethylbenzene  | 95-63-6                                  | 1.00%  | 0.00079%   |                 |
|                                     |             |                  | Ethanol   | 64-17-5                                  | 60.00%   | 0.04763%   |                 |
|                                     |             |                  | Heavy Aromatic Petroleum Naphtha  | 64742-94-5                               | 30.00%   | 0.02382%   |                 |
|                                     |             |                  | Naphthalene   | 91-20-3                                  | 1.00%  | 0.00079%   |                 |
|                                     |             |                  | Poly(oxy-1,2-Ethanediy),<br>Alpha-(4-Nonylphenyl)-Omega-Hydroxy<br>-,Branched | 127087-87-0                              | 10.00%   | 0.00794%   |                 |
| CL-28M CROSSLINKER                  | Halliburton | Crosslinker      | Crystalline Silica, Quartz  | 14808-60-7                               | 5.00%  | 0.00249%   |                 |
|                                     |             |                  | Borate Salts  | Proprietary                              | 60.00%   | 0.02989%   |                 |
| MO-67                               | Halliburton | Buffer           | Sodium Hydroxide  | 1310-73-2                                | 30.00%   | 0.00283%   |                 |
| BA-40L BUFFERING AGENT              | Halliburton | Buffer           | Potassium Carbonate   | 584-08-7                                 | 60.00%   | 0.03990%   |                 |
| FE-1A ACIDIZING COMPOSITION         | Halliburton | Misc Additive    | Acetic Acid   | 64-19-7                                  | 60.00%   | 0.00255%   |                 |
|                                     |             |                  | Acetic Anhydride  | 108-24-7                                 | 100.00%  | 0.00425%   |                 |
| K-38                                | Halliburton | Crosslinker      | Disodium Octaborate Tetrahydrate  | 12008-41-2                               | 100.00%  | 0.02099%   |                 |
| LGC-36 UC                           | Halliburton | Gelling Agent    | Guar Gum  | 9000-30-0                                | 60.00%   | 0.16582%   |                 |
|                                     |             |                  | Naphtha, Hydrotreated Heavy   | 64742-48-9                               | 60.00%   | 0.16582%   |                 |
| BE-3S BACTERICIDE                   | Halliburton | Biocide          | 2,2 Dibromo-3-Nitrilopropionamide   | 10222-01-2                               | 100.00%  | 0.00119%   |                 |
|                                     |             |                  | 2-Monobromo-3-Nitrilopropionamide   | 1113-55-9                                | 5.00%  | 0.00006%   |                 |
| OPTIFLO-III DELAYED RELEASE BREAKER | Halliburton | Breaker          | Ammonium Persulfate   | 7727-54-0                                | 100.00%  | 0.00889%   |                 |
|                                     |             |                  | Crystalline Silica, Quartz  | 14808-60-7                               | 30.00%   | 0.00267%   |                 |
| SP BREAKER                          | Halliburton | Breaker          | Sodium Persulfate   | 7775-27-1                                | 100.00%  | 0.00237%   |                 |
|                                     |             |                  |   |  |  |  |                 |
|                                     |             |                  |   |  |  |  |                 |

\* 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%

All component information listed was obtained from the supplier's Material Safety Data Sheets (MSDS). As such, the Operator is not responsible for inaccurate and/or incomplete information. Any questions regarding the content of the MSDS should be directed to the supplier who provided it. The Occupational Safety and Health Administration's (OSHA) regulations govern the criteria for the disclosure of this information. Please note that Federal Law protects "proprietary", "trade secret", and "confidential business information" and the criteria for how this information is reported on an MSDS is subject to 29 CFR 1910.1200(i) and Appendix D.