

Hydraulic Fracturing Fluid Product Component Information Disclosure

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|----------------------------|-----------------|
| Last Fracture Date | 02/08/2013 |
| State: | California |
| County: | Kern |
| API Number: | 04-030-48417 |
| Operator Name: | Aera Energy Llc |
| Well Name and Number: | 732EU-29 |
| Longitude: | -119.7385843 |
| Latitude: | 35.4684968 |
| Long/Lat Projection: | NAD83 |
| Production Type: | Oil |
| True Vertical Depth (TVD): | 1,429 |
| Total Water Volume (gal)*: | 21,546 |

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% | 77.51884% | |
| GBW-5 | Baker Hughes | Breaker | Ammonium Phosphate | 7727-54-0 | 100.00% | 0.00863% | SmartCare Product |
| Enzyme G-I | Baker Hughes | Breaker | Hemicellulase Enzyme Concentrate | 9025-56-3 | 3.00% | 0.00259% | SmartCare Product |
| | | | Water | 7732-18-5 | 97.00% | 0.08376% | |
| Clay Master-5C (Tote) | Baker Hughes | Clay Control | Oxyakylated Amine Quat | 138879-94-4 | 60.00% | 0.07386% | |
| XLW-10A | Baker Hughes | Crosslinker | Ethylene Glycol | 107-21-1 | 30.00% | 0.03942% | SmartCare Product |
| | | | Sodium Hydroxide | 1310-73-2 | 10.00% | 0.01314% | |
| | | | Sodium Tetraborate | 1330-43-4 | 30.00% | 0.03942% | |
| GW-3LDF | Baker Hughes | Gelling Agent | 1-Butoxy-2-Propanol | 5131-66-8 | 5.00% | 0.02354% | SmartCare Product |
| | | | Cyrstalline Silica, Quartz (SiO2) | 14808-60-7 | 5.00% | 0.02354% | |
| | | | Guar Gum | 9000-30-0 | 60.00% | 0.28246% | |
| | | | Isotridecanol, ethoxylated | 9043-30-5 | 5.00% | 0.02354% | |
| | | | Paraffinic Petroleum Distillate | 64742-55-8 | 30.00% | 0.14123% | |
| | | | Petroleum Distillates | 64742-47-8 | 30.00% | 0.14123% | |
| Sand, White, 20/40 | Baker Hughes | Proppant | Crystalline Silica (Quartz) | 14808-60-7 | 100.00% | 21.55815% | |
| 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. | | | | | | | |
| | | | 2-Butoxy-1-Propanol | 15821-83-7 | | 0.0003766135% | |

