Submit within 45 days of well completion

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

Revised November 6, 2013

1. WELL API NO. 30-015-42364
2. Well Name: BARNSDALL FEDERAL #020
3. Well Number: 020

HYDRAULIC FRACTURING FLUID DISCLOSURE

☒ Original

☐ Amendment

4. Surface Hole Location:
Unit:A Lot:A Section:27 Township:17S Range:29E
Feet from:715 N/S Line:N
Feet from:900 E/W Line:E

5. Bottom Hole Location:
Unit:A Lot:A Section:27 Township:17S Range:29E
Feet from:715 N/S Line:N
Feet from:900 E/W Line:E

6. latitude: 32.8108476791556 longitude: -104.056969737186

7. County: Eddy

8. Operator Name and Address:
APACHE CORP
303 Veterans Airpark Lane
Suite 3000
Midland 79705

9. OGRID: 873

10. Phone Number: 432-818-1062

11. Last Fracture Date: 9/25/2014 Frac Performed by: Baker Hughes

12. Production Type: O

13. Pool Code(s): 96610

14. Gross Fractured Interval: 4,149 ft to 5,762 ft

15. True Vertical Depth (TVD): 5,762 ft

16. Total Volume of Fluid Pumped: 495,600 gals

17. Total Volume of Re-Use Water Pumped: N/A

18. Percent of Re-Use Water in Fluid Pumped: Not Disclosed

19. **HYDRAULIC FLUID COMPOSITION AND CONCENTRATION:**

Trade Name	Supplier	Purpose	Ingredients	(CAS #) Chemical Abstract Service #	Maximum Ingredient Concentration in Additive (% by mass)	Maximum Ingredient Concentration in HF Fluid (% by mass)
Water	Operator	Carrier	Water	7732-18-5	100%	85.88626%
HCl, 10.1 - 15%	Baker Hughes	Acidizing	Hydrochloric Acid	7647-01-0	15%	0.1585%
Activator, 330 gal tote	Baker Hughes	Activator	Alcohols, C12-14-Secondary, Ethoxylated	84133-50-6	70%	0.03348%
			Methanol	67-56-1	50%	0.02391%
			Polyethylene glycol	25322-68-3	5%	0.00239%
Alpha 125	Baker Hughes	Biocide	Glutaraldehyde	111-30-8	30%	0.00629%
GBW-5	Baker Hughes	Breaker	Ammonium Persulphate	7727-54-0	100%	0.00208%
GBW-15L	Baker Hughes	Breaker	Enzyme solution	Trade Secret	100%	0.03386%
BF-7L	Baker Hughes	Buffer	Potassium Carbonate	584-08-7	60%	0.00214%
ClayCare, tote	Baker Hughes	Clay Control	Choline Chloride	67-48-1	75%	0.03298%
			Water	7732-18-5	30%	0.01319%
CI-14	Baker Hughes	Corrosion Inhibitor	Fatty Acids	Trade Secret	10%	0.00023%
			Methanol	67-56-1	100%	0.00226%
			Olefin	Trade Secret	5%	0.00011%
			Polyoxyalkylenes	Trade Secret	30%	0.00068%
			Propargyl Alcohol	107-19-7	5%	0.00011%
XLW-10A	Baker Hughes	Crosslinker	Ethylene Glycol	107-21-1	25%	0.03214%
			Sodium Hydroxide	1310-73-2	9%	0.01157%
			Sodium Tetraborate	1330-43-4	12%	0.01543%
GW-4LDF	Baker Hughes	Gelling Agent	Guar Gum	9000-30-0	60%	0.32665%
			Hydrotreated Light Distillate	64742-47-8	30%	0.16332%
			Mineral Oil	8042-47-5	70%	0.38109%
			Paraffinic Petroleum Distillate	64742-55-8	30%	0.16332%
Ferrotrol 280L	Baker Hughes	Iron Control	2-Mercaptoethanol	60-24-2	100%	0.00343%
			Ammonium Hydroxide	1336-21-6	5%	0.00017%
			Cupric Chloride	7447-39-4	5%	0.00017%
NE-35, 330 gl tote	Baker Hughes	Non-emulsifier	Propylene Glycol	57-55-6	15%	0.0004%
Sand, White, 16/30	Baker Hughes	Proppant	Crystalline Silica (Quartz)	14808-60-7	100%	9.56921%
SiberProp, 16/30	Baker Hughes	Proppant	Quartz (SiO2)	14808-60-7	100%	1.93795%
ES-4	Baker Hughes	Solvent	Hydrotreated Light Distillate	Trade Secret	100%	0.04836%
			Mineral Oil	Trade Secret	100%	0.04836%
			Paraffinic Petroleum Distillate	Trade Secret	100%	0.04836%
S-200	Baker Hughes	Surfactant	Ethanol	64-17-5	10%	0.008%
Ingredients shown above are subject to 29 CFR 1910			Alcohols, C10-16, ethoxylated propoxylated	Trade Secret	0%	0.0040006%
			Alcohols, C6-12, ethoxylated propoxylated	Trade Secret	0%	0.0040006%
			Alcohols, ethoxylated	Trade Secret	0%	0.0032005%
			Amines, unsatd. alkyl, ethoxylated	Trade Secret	0%	0.0016002%
			Benzenesulfonic acid, hexadecyl (sulfophenoxy)-, disodium salt	Trade Secret	0%	5.31E-05%
			Formaldehyde	50-00-0	0%	2.26E-05%
			Hydrochloric Acid	7647-01-0	0%	2.26E-05%
			Methanol	67-56-1	0%	5.24E-05%
			Modified Thiourea Polymer	68527-49-1	0%	0.0001582%
			Nonionic glycol ester	Trade Secret	0%	0.0006641%
			Potassium Hydroxide	1310-58-3	0%	3.56E-05%
			Sodium lauriminodipropionate	Trade Secret	0%	2.66E-05%
			Sodium octylimodipropionate	Trade Secret	0%	7.97E-05%
			Water	7732-18-5	0%	0.967558%

20. I, as Operator, hereby certify that the information shown on this disclosure form is true and complete to the best of my knowledge and belief.

Signature: Signed Electronically Printed Name: Fatima Vasquez Title: Regulatory Analyst

Date: 2/19/2015

E-mail Address: fatima.vasquez@apachecorp.com

NMOCD does not require the reporting of information beyond MSDS data as described in 29 CFR 1910.1200. NMOCD does not require the reporting or disclosure of proprietary, trade secret or confidential business information.