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.
30-015-42035

2. Well Name:
AAO FEDERAL #018

3. Well Number:
018

HYDRAULIC FRACTURING FLUID DISCLOSURE

☒ Original

☐ Amendment

4. Surface Hole Location:
Unit:G Lot:G Section:1 Township:18S Range:27E
Feet from:2310 N/S Line:N
Feet from:1650 E/W Line:E

5. Bottom Hole Location:
Unit:G Lot:G Section:1 Township:18S Range:27E
Feet from:2310 N/S Line:N
Feet from:1650 E/W Line:E

6. latitude: 32.776911955207 longitude: -104.228952697975

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: 9/11/2014 Frac Performed by: Cudd

12. Production Type:
O

13. Pool Code(s):
96836

14. Gross Fractured Interval:
3,471 ft to 4,306 ft

15. True Vertical Depth (TVD):
4,600 ft

16. Total Volume of Fluid Pumped:
225,498 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	Company Supplied	Carrier/Base Fluid	Water	7732-18-5	100%	85.36646%
Sand (Proppant)	Mississippi Sand/Chieftain Sand/Santrol/Cadre/Unim	Proppant	Quartz	14808-60-7	99%	13.54258%
The Reducer	Chemplex	Iron Control	Cupric Chloride Dihydrate	10125-13-0	7%	0%
			Thioglycol	60-24-2	75%	0%
Plexbreak 150	Chemplex	Non Emulsifier	Methyl Alchol	67-56-1	50%	0%
Plexgel 907 LEB	Chemplex	Slurried Guar	Distillate, petroleum, hydrotreated light	64742-47-8	70%	0.30814%
			C-11 to C-14 n-alkanes, mixed	1120-21-4	60%	0.26412%
			Propylene pentamer	15220-87-8	60%	0.26412%
Plexgel Breaker 10-L	Chemplex	Enzyme Breaker	No hazardous ingredients per MSDS	Proprietary	100%	0.00114%
WRS	Chemplex	Surfactant	Methyl Alchol	67-56-1	12%	0.01057%
			2-Butoxyethanol	111-76-2	35%	0.03084%
Plexgel Breaker HT	Chemplex	Encap Breaker	AmmoniumPersSulfate	7727-54-0	90%	0%
Plexcide 24-L	Chemplex	Boicide	Tetrahydro-3,5-Dimethyl-2H-1,3,5-thiadiazine-2-thione	533-74-4	24%	0.00621%
			Sodium Hydroxide	1310-73-2	4%	0.00104%
Plexhib 256	Chemplex	Corrosion Inhibitor	Methyl Alcohol	67-56-1	30%	0%
			Propargyl Alchol	107-19-7	4%	0%
Plexbor 101	Chemplex	Crosslinker	Potassium Metaborate	13709-94-9	30%	0.04533%
			Potassium Hydroxide	1310-58-3	5%	0.00755%
			Ethylene Glycol	107-21-1	10%	0.01511%
Plexaid 667	Chemplex	Scale Inhibitor	No hazardous ingredients per MSDS	Proprietary	100%	0%
Hydrochloric Acid	Reef	Acid	Hydrogen Chloride	7647-01-0	15%	0%
			Water	7732-18-5	85%	0%
Claymax	Chemplex	Clay Control	No hazardous ingredients per MSDS	Proprietary	100%	0%
Acetiplex 80	Chemplex	PH Control	Acetic Acid	64-19-7	85%	0%
			Methanol	67-56-1	5%	0%
Plexslick 961	Chemplex	Friction Reducer	Petroleum Distillate	64742-47-8	30%	0%
Greenhib 679	Chemplex	Scale Inhibitor	No hazardous ingredients per MSDS	Proprietary	100%	0%
Caustic Soda Solution	Chemplex	Biuffer	Sodium Hydroxide	001310-73-2	50%	0%
SuperSet W	Chemplex	Resin Activator	Methyl Alcohol	67-56-1	50%	0.02205%
			Polyethylene Glycol Nonlphenyl Ether	9016-45-9	50%	0.02205%
Ammonium Persulfate	Chemplex	Breaker	Peroxydisulfuric Acid Disodium Salt	7727-54-0	100%	0.05451%

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: Paige Futrell Title: Regulatory Analyst

Date: 10/28/2014

E-mail Address: paige.futrell@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.