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. 30-015-38338

2. Well Name: EMERALD PWU 20 #001H

3. Well Number: 001H

HYDRAULIC FRACTURING FLUID DISCLOSURE

☒ Original

☐ Amendment

4. Surface Hole Location:
Unit:D Lot:D Section:20 Township:19S Range:29E
Feet from:400 N/S Line:N
Feet from:330 E/W Line:W

5. Bottom Hole Location:
Unit:D Lot:D Section:20 Township:19S Range:29E
Feet from:400 N/S Line:N
Feet from:330 E/W Line:W

6. latitude: 32.6525154892253 longitude: -104.104537705719

7. County: Eddy

8. Operator Name and Address:
DEVON ENERGY PRODUCTION COMPANY, LP
333 W. Sheridan Avenue
Oklahoma City 73102

9. OGRID: 6137

10. Phone Number: 405-228-8588

11. Last Fracture Date: 4/21/2011 Frac Performed by: BHI

12. Production Type: O

13. Pool Code(s): 55510

14. Gross Fractured Interval: Confidential

15. True Vertical Depth (TVD): 7,882 ft

16. Total Volume of Fluid Pumped: 1,190,465 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%	84.33179%
Frac Sand (All Meshes) [CWT]	BHI	Proppant	Crystalline Silica (Quartz)	14808-60-7	100%	10.85858%
Super LC	BHI	Proppant	Silicon Dioxide (Silica Sand)	14808-60-7	97%	3.0617%
			Phenol Formaldehyde Resin	9003-35-4	5%	0.15782%
			Hexamethylenetetramine	1009-7-0	0.01%	0.00032%
Ferrotrol 300L	BHI	Iron Control	Citric Acid	77-92-9	70%	0.0025%
Hydrochloric Acid, 5.1-7.5%	BHI	Acidizing	Hydrochloric Acid	7647-01-0	7.5%	0.04934%
			Water	7732-18-5	92.5%	0.60854%
Enzyme G-I	BHI	Breaker	Hemicellulase Enzyme Concentrate	9025-56-3	3%	0.00191%
			Water	7732-18-5	97%	0.06185%
Alpha 125	BHI	Biocide	Glutaraldehyde	111-30-8	30%	0.00489%
ES-4A	BHI	Solvent	Petroleum Distillates Blend	Proprietary	100%	0.00749%
GW-4LDF	BHI	Gellant	Petroleum Distillates Blend	Proprietary	70%	0.37849%
			Guar Gum	9000-30-0	40%	0.21628%
FRW-14	BHI	Friction Reducer	Hydrotreated Light Distillate	64742-47-8	40%	0.00277%
			Ethoxylated Alcohol	68439-50-9	5%	0.00035%
AG-12	BHI	Gellant-Acid	Distillates, Petroleum, Hydrotreated Middle	64742-47-8	30%	0.00029%
			Nonylphenol Ethoxylate	64742-46-7	5%	5E-05%
			Acrylic Polymers	26006-22-4	60%	0.00058%
XLW-4	BHI	Crosslinker	Sodium Borate Decahydrate	1303-96-4	30%	0.00757%
High Perm CRB	BHI	Breaker	Ammonium Persulphate	7727-54-0	100%	0.00298%
			Crystalline Silica Quartz	14808-60-7	15%	0.00045%
CI-27	BHI	Corrosion Inhibitor	Methanol	67-56-1	60%	0.00061%
			Thiourea Polymer	68527-49-1	30%	0.00031%
			Tall Oil Acid	61790-12-3	30%	0.00031%
			Ethoxylated Alcohols^ C14-15	68951-67-7	30%	0.00031%
			Propargyl Alcohol	107-19-7	10%	0.0001%
			Alkenes^ C>10 Alpha-	64743-02-8	5%	5E-05%
GBW-18	BHI	Breaker	Sodium Persulfate	7775-27-1	100%	0.00084%
XLW-30AG	BHI	Crosslinker	Hydrotreated Light Distillate	64742-47-8	70%	0.04052%
Inflo 250W	BHI	Surfactant	Surfactants	Proprietary	80%	0.0312%
			2-Butoxyethanol	111-76-2	20%	0.0078%
			Methanol	67-56-1	30%	0.0117%
ClayCare	BHI	Clay Control	Choline Chloride	67-48-1	75%	0.06884%
			Water	7732-18-5	30%	0.02754%
Flo-Back Prime	BHI	Surfactant	Secondary Alcohol	Proprietary	100%	0.00062%
			Essential Oils	Proprietary	100%	0.00062%
NE-900	BHI	Non-emulsifier	Methanol	67-56-1	30%	0.0255%
			Nonyl Phenyl Polyethylene Glycol Ether	9016-45-9	10%	0.0085%
BF-9L	BHI	Buffer	Potassium Hydroxide	1310-58-3	15%	0.01748%
Clay Master-5C	BHI	Clay Control	Oxyakylated Amine Quat	138879-94-4	60%	0.0002%

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: Sara Cook Title: Regulatory Associate

Date: 12/12/2014

E-mail Address: sara.cook@dvn.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.