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 February 15, 2012

1. WELL API NO.
30-039-29936

2. Well Name:
JICARILLA CONTRACT 155 #013N

3. Well Number:
013N

HYDRAULIC FRACTURING FLUID DISCLOSURE

☒ Original

☐ Amendment

4. Surface Hole Location:
Unit:K Lot:K Section:30 Township:26N Range:05W
Feet from:1550 N/S Line:S
Feet from:1810 E/W Line:W

5. Bottom Hole Location:
Unit:K Lot:K Section:30 Township:26N Range:05W
Feet from:1550 N/S Line:S
Feet from:1810 E/W Line:W

6. latitude: 0 longitude: 0

7. County:
Rio Arriba

8. Operator Name and Address:
ENERVEST OPERATING L.L.C.
1001 Fannin Street
Suite 800
Houston 77002

9. OGRID: 143199

10. Phone Number: 713-659-3500

11. Last Fracture Date: 7/26/2013 Frac Performed by: Baker Hughes

12. Production Type:
G

13. Pool Code(s):
71599, 72319

14. Gross Fractured Interval:
4,550 ft to 7,292 ft

15. True Vertical Depth (TVD):
7,330 ft

16. Total Volume of Fluid Pumped:
295,882 gals

17. **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%	83.5046%
Sand, Brown, 20/40	Baker Hughes	Proppant	Crystalline Silica (Quartz)	14808-60-7	100%	6.77919%
Nitrogen	Baker Hughes	Nitrogen	Liquid Nitrogen	7727-37-9	100%	5.37287%
Super LC, 20/40	Baker Hughes	Proppant	Silicon Dioxide (Silica Sand)	14808-60-7	97%	1.97524%
			P/F Resin	9003-35-4	5%	0.10182%
			Hexamethylenetetramine	100-97-0	0.01%	0.0002%
HCl, 10.1 - 15%	Baker Hughes	Acidizing	Water	7732-18-5	85%	0.83444%
			Hydrochloric Acid	7647-01-0	15%	0.14725%
LiteProp 108, 14/40 mesh	Baker Hughes	Prpppant	Non-Hazardous Ingredients	Trade Secret	100%	0.66682%
GW-3LDF	Baker Hughes	Gelling Agent	Guar Gum	9000-30-0	60%	0.06278%
			Petroleum Distillates	64742-47-8	30%	0.03139%
			Paraffinic Petroleum Distillate	64742-55-8	30%	0.03139%
			Crystalline Silica: Quartz	14808-60-7	5%	0.00523%
			1-butoxy-2-propanol	5131-66-8	5%	0.00523%
			Isotridecanol, ethoxylated	9043-30-5	5%	0.00523%
GasFlo G, 330 gal tote	Baker Hughes	Surfactant	Mixture of Surfactants	Trade Secret	60%	0.05448%
			Water	7732-18-5	50%	0.0454%
			Methanol	67-56-1	30%	0.02724%
FAW-22, 260 gal. tote	Baker Huges	Foamer	Isopropanol	67-63-0	30%	0.03344%
			Sodium Sulfonate	68439-57-6	30%	0.03344%
			Ammonium Alkyl Ether Sulfate	Trade Secret	10%	0.01115%
			Alkyl Sulfate (3 of 3)	Trade Secret	1%	0.00111%
			Alkyl Sulfate (1 of 3)	Trade Secret	1%	0.00111%
			Alkyl Sulfate (2 of 3)	Trade Secret	1%	0.00111%
Alpha 1427	Baker Hughes	Biocide	Glutaraldehyde	111-30-8	30%	0.03394%
			Didecyl Dimethyl Ammonium Chloride	7173-51-5	10%	0.01131%
			Ethanol	64-17-5	5%	0.00566%
			Quaternary Ammonium Compound	68424-85-1	5%	0.00566%
Superset-W, 55 gal drum	Baker Hughes	Activator	Poly (Oxyethylene) Nonylphenol Ether	9016-45-9	50%	0.00796%
MaxPerm-20A, 265 gal tote	Baker Hughes	Friction Reducer	Aliphatic Hydrocarbon	Trade Secret	30%	0.0078%
			Oxyalkylated Alcohol	Trade Secret	5%	0.0013%
GBW-5	Baker Hughes	Breaker	Ammonium Phosphate	7727-54-0	100%	0.00795%
BioSealers MR	Baker Hughes	Degradable Sealers	Non-Hazardous Ingredient	Trade Secret	100%	0.00609%
CI-27	Baker Hughes	Corrosion Inhibitor	Methanol	67-56-1	60%	0.00181%
			Fatty Acids	Trade Secret	30%	0.0009%
			Thiourea Polymer	68527-49-1	30%	0.0009%
			Polyoxyalkylenes	Trade Secret	30%	0.0009%
			Propargyl Alcohol	107-19-7	10%	0.0003%
			Olefin	Trade Secret	5%	0.00015%
Ferrotrol 300L	Baker Hughes	Iron Control	Citric Acid	77-92-9	60%	0.00341%
Enzyme G-IV	Baker Hughes	Breaker	Contains Non-Hazardous Ingredients listed in Non-MSDS section	NA	0%	0%
Non-MSDS Ingredients			Water	7732-18-5	0%	0.13748%
			Anionic Tepoylmer	Trade Secret	0%	0.0156%
			Oxyalkylated Fatty Acid Derivative	Trade Secret	0%	0.0013%
			Polyol Ester	Trade Secret	0%	0.0013%
			Inorganic Salt	7647-14-5	0%	0.0013%
			Sodium Chloride	7647-14-5	0%	0.00113%
			Formaldehyde	50-00-0	0%	0.00113%
			Fatty Amide Derivative	70851-08-0	0%	0.00111%
			Sodium Sulfate	7757-82-6	0%	0.00111%
			Ethylene Glycol	107-21-1	0%	0.00111%
			Ethoxylated Alcohol	Trade Secret	0%	0.00111%
			2-butoxy-1-propanol	15821-83-7	0%	8E-05%
			EDTA	64-02-8	0%	1E-05%
			Hemicellulase Enzyme Concentrate	9025-56-3	0%	0%

18. 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: Ronnie Young Title: Regulatory Director

Date: 9/19/2013

E-mail Address: ryoung@enervest.net

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.