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.: 30-025-42818

2. Well Name: PAN HEAD FEE #013H

3. Well Number: 013H

HYDRAULIC FRACTURING FLUID DISCLOSURE

☒ Original

☐ Amendment

4. Surface Hole Location:
Unit:C Lot:C Section:11 Township:17S Range:32E
Feet from:245 N/S Line:N
Feet from:1770 E/W Line:W

5. Bottom Hole Location:
Unit:C Lot:C Section:11 Township:17S Range:32E
Feet from:245 N/S Line:N
Feet from:1770 E/W Line:W

6. latitude: 32.85553845 longitude: -103.73942539

7. County: Lea

8. Operator Name and Address:
COG OPERATING LLC
One Concho Center
600 W. Illinois Ave
Midland 79701

9. OGRID: 229137

10. Phone Number: 432-685-4332

11. Last Fracture Date: 6/27/2016 Frac Performed by: Halliburton

12. Production Type: O

13. Pool Code(s): 44500

14. Gross Fractured Interval: 6,055 ft to 11,679 ft

15. True Vertical Depth (TVD): 5,882 ft

16. Total Volume of Fluid Pumped: 4,791,909 gals

17. Total Volume of Re-Use Water Pumped: 0 gals

18. Percent of Re-Use Water in Fluid Pumped: %

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)
Fresh Water	Operator	Base Fluid	Water	7732-18-5	100%	88.65588%
DCA-23003	Halliburton	Friction Reducer	Listed Below	Listed Below	0%	0%
FDP-S1226-15	Halliburton	Surfactant	Listed Below	Listed Below	0%	0%
FE-1A ACIDIZING COMPOSITION	Halliburton	Additive	Listed Below	Listed Below	0%	0%
FE-2A	Halliburton	Additive	Listed Below	Listed Below	0%	0%
HAI-OS ACID INHIBITOR	Halliburton	Corrosion Inhibitor	Listed Below	Listed Below	0%	0%
HYDROCHLORIC ACID	Halliburton	Solvent	Listed Below	Listed Below	0%	0%
OptiKleen-WF(TM)	Halliburton	Concentrate	Listed Below	Listed Below	0%	0%
PROP-CERAMIC 40/70	Halliburton	Proppant	Listed Below	Listed Below	0%	0%
SAND-COMMON WHITE-100 MESH, SSA-2	Halliburton	Proppant	Listed Below	Listed Below	0%	0%
SAND-PREMIUM WHITE-40/70	Halliburton	Proppant	Listed Below	Listed Below	0%	0%
Scalechek(R) SCP-2 Scale Inhibitor	Halliburton	Scale Preventer	Listed Below	Listed Below	0%	0%
CAT106SI	Catalyst Oilfield Services, LLC	Scale Inhibitor	Listed Below	Listed Below	0%	0%
MSDS and Non-MSDS Ingredients are listed below the					0%	0%
Ingredients	Listed Above	Listed Above	Acetic acid	64-19-7	60%	0.01169%
			Acetic anhydride	108-24-7	100%	0.01948%
			Acrylamide	79-06-1	0.01%	0%
			Acrylamide, sodium acrylate polymer	25987-30-8	30%	0.02611%
			Alcohols, C12-13, ethoxylated	66455-14-9	30%	0.0134%
			Alcohols, C12-16, ethoxylated	68551-12-2	5%	0.00223%
			Aluminum Silicate	1302-76-7	100%	1.11052%
			Citric acid	77-92-9	60%	0.01213%
			Crystalline silica, cristobalite	14464-46-1	30%	0.33316%
			Crystalline silica, quartz	14808-60-7	100%	9.04%
			Ethoxylated alcohols	Proprietary	30%	0.00216%
			Ethoxylated branched C13 alcohol	78330-21-9	5%	0.00435%
			Ethylene oxide	75-21-8	0.01%	0%
			Fatty acids, tall oil	Proprietary	30%	0.00097%
			Glassy calcium magnesium phosphate	65997-17-3	100%	0.01664%
			Hydrochloric acid	7647-01-0	60%	1.21309%
			Hydrochloric acid	7647-01-0	40%	0.01541%
			Hydrotreated light petroleum distillate	64742-47-8	30%	0.02611%
			Methanol	67-56-1	60%	0.00193%
			Mullite	1302-93-8	100%	1.11052%
			Olefins	Proprietary	5%	0.00039%
			Phosponate Compound	Proprietary	60%	0.02311%
			Propargyl alcohol	107-19-7	10%	0.00032%
			Reaction product of acetophenone, formaldehyde, thiourea and oleic acid in dimethyl formamide	68527-49-1	30%	0.00097%
			Silica, amorphous - fumed	7631-86-9	30%	0.33316%
			Sobitan, mono-9-octadecenoate, (Z)	1338-43-8	5%	0.00435%
			Sodium diacetate	126-96-5	5%	0.00435%
			Sodium perborate tetrahydrate	10486-00-7	100%	0.00942%
			Sorbitan monooleate polyoxyethylene derivative	9005-65-6	5%	0.00435%
			Water	7732-18-5	100%	2.16169%

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: Kanicia Carrillo Title: Regulatory Analsyt

Date: 9/2/2016

E-mail Address: kcarrillo@concharesources.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.