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 5, 2013

1. WELL API NO. 30-015-42472
2. Well Name: BARN OWL FEDERAL #002H
3. Well Number: 002H
4. Surface Hole Location: Unit:B Lot:B Section:19 Township:26S Range:27E; Feet from:520 N/S Line:N; Feet from:1450 E/W Line:E
5. Bottom Hole Location: Unit:B Lot:B Section:18 Township:26S Range:27E; Feet from:334 N/S Line:N; Feet from:1894 E/W Line:E
6. latitude: 32.03369610259 longitude: -104.225359295506
7. County: Eddy

HYDRAULIC FRACTURING FLUID DISCLOSURE

☒ Original
☐ Amendment

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: 10/11/2014 Frac Performed by: Baker Hughes
12. Production Type: O
13. Pool Code(s): 64010
14. Gross Fractured Interval: 8,527 ft to 14,005 ft
15. True Vertical Depth (TVD): 8,290 ft
16. Total Volume of Fluid Pumped: 5,752,000 gal
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%	81.5891%
HCL 5.1 - 7.5%	Baker Hughes	Acidizing	Hydrochloric Acid	7647-01-0	7.5%	0.18806%
Supertwil-W, 330 gl tote	Baker Hughes	Activator	Methanol	67-56-1	50%	0.0221%
			Poly (Oxyethylene) Nonylphenol Ether	9016-45-9	50%	0.0221%
Alpha 125	Baker Hughes	Biocide	Glutaraldehyde	111-30-8	30%	0.01799%
GBW-5	Baker Hughes	Breaker	Ammonium Persulphate	7727-54-0	100%	0.00059%
Enzyme G-III	Baker Hughes	Breaker	Contains non-hazardous ingredients which are listed in the non-MSDS section of the report	NA	0%	0%
High Perm CRB	Baker Hughes	Breaker	Ammonium Persulphate	7727-54-0	100%	0.00447%
Clay Master-5C (Tote)	Baker Hughes	Clay Control	Oxyalkylated Amine Quat	Trade Secret	60%	0.01550%
Ferrotrol 280L , 330 gl tote	Baker Hughes	Clay Control	2-Mercaptoethanol	60-24-2	100%	0.00616%
			Ammonium Hydroxide	1336-21-6	5%	0.00031%
			Cupric Chloride	7447-39-4	5%	0.00031%
ClayCare, Clay Treat-2C, 330 gl tote	Baker Hughes	Clay Control	Choline Chloride	67-48-1	75%	0.04898%
			Water	7732-18-5	30%	0.01955%
CI-27	Baker Hughes	Corrosion Inhibitor	Fatty Acids	Trade Secret	30%	0.00049%
			Methanol	67-56-1	60%	0.00099%
			Olefin	Trade Secret	5%	8E-05%
			Polyoxyalkylenes	Trade Secret	30%	0.00049%
			Propargyl Alcohol	107-19-7	10%	0.00016%
			Thiourea Polymer	68527-49-1	30%	0.00049%
XLW-10A	Baker Hughes	Crosslinker	Ethylene Glycol	107-21-1	25%	0.01821%
			Sodium Hydroxide	1310-73-2	9%	0.00655%
			Sodium Tetraborate	1330-43-4	12%	0.00874%
GW-4	Baker Hughes	Gelling Agent	Guar Gum	9000-30-0	100%	0.20114%
NE-35, 330 gl tote	Baker Hughes	Non-emulsifier	Propylene Glycol	57-55-6	15%	0.00045%
Parasorb 5000, bag	Baker Hughes	Paraffin Inhibitor	Acetic acid ethenyl ester, polymer with ethene	Trade Secret	15%	0.00311%
			Crystalline Silica (Cristobalite)	14464-46-1	1%	0.00021%
			Crystalline Silica (Quartz)	14808-60-7	1%	0.00021%
			Diatomaceous Earth, Calcined (kieselguhr)	91053-39-3	70%	0.01452%
			Diatomaceous Earth, Natural (kieselguhr)	61790-53-2	10%	0.00207%
			Mineral Oil	Trade Secret	15%	0.00311%
Sand, White, 20/40	Baker Hughes	Proppant	Crystalline Silica (Quartz)	14808-60-7	100%	12.44496%
Super LC, 20/40	Baker Hughes	Proppant	PIF Resin	9003-35-4	5%	0.15275%
			Silicon Dioxide (Silica Sand)	14808-60-7	97%	2.96335%
ScaleSorb 7 (50 lb)	Baker Hughes	Scale Inhibitor	Crystalline Silica (Quartz)	14808-60-7	1%	0.00011%
			Diatomaceous Earth, Calcined	91053-39-3	100%	0.01138%
			Organo Phosphorus Salt	Trade Secret	30%	0.00341%
			Sodium Chloride	7647-14-5	10%	0.00114%
Scaletrol 720, 330 gl tote	Baker Hughes	Scale Inhibitor	Calcium Chloride	10043-52-4	5%	0.0009%
			Ethylene Glycol	107-21-1	45%	0.00539%
HFlo 2510	Baker Hughes	Surfactant	Ethanol	64-17-5	10%	0.00499%
Ingredients shown above are subject to 29 CFR 1910			2-Propenoic, Polymer with Sodium Phosphinate, Sodium Salt	71050-62-9	0%	0.00239%
			Alcohols, C10-16, ethoxylated propoxylated	Trade Secret	0%	0.00349%
			Alcohols, C6-12, ethoxylated propoxylated	Trade Secret	0%	0.00349%
			Alcohols, ethoxylated	Trade Secret	0%	0.00399%
			Amines, unsatd., alkyl, ethoxylated	Trade Secret	0%	0.00199%
			Benzenesulfonic acid, hexadec-(sulfophenoxy)- , disodium salt	Trade Secret	0%	5.94E-05%
			Formaldehyde	50-00-0	0%	8E-07%
			Hemicellulase Enzyme Concentrate	9025-56-3	0%	0.00076%
			Hexamethylenetetramine	100-97-0	0%	0.00035%
			Hydrated Magnesium Silicate	Trade Secret	0%	4.47E-05%
			Methanol	67-56-1	0%	0.00014%
			Nonionic glycol ester	Trade Secret	0%	0.00074%
			Poly (Tetrafluoroethylene)	Trade Secret	0%	2.23E-05%
			Potassium Chloride	7447-40-7	0%	0.00051%
			Sodium Bisulfate	7631-90-5	0%	0.00011%
			Sodium Chloride	7647-14-5	0%	0.00076%
			Sodium Sulfonate	970-42-4	0%	5.69E-05%
			Sodium Thioglycolate	Trade Secret	0%	2.97E-05%
			Sodium Polydimidopropionate	Trade Secret	0%	8.91E-05%
			Vinylidene Chloride-Methyl Acrylate Polymer	Trade Secret	0%	0.00119%
			Water	7732-18-5	0%	2.17419%

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: Storm Davis Title: Regulatory Analyst

Date: 2/26/2015

E-mail Address: sdavis@concholresources.com

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