

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 APT NO:
30-015-42485

2. Well Name:
HORNED OWL FEDERAL #002H

3. Well Number:
002H

HYDRAULIC FRACTURING FLUID DISCLOSURE

☒ Original

☐ Amendment

4. Surface Hole Location:
Unit:C Lot:C Section:25 Township:26S Range:26E
Feet from: 190 N/S Line:N
Feet from: 1870 E/W Line:W

5. Bottom Hole Location:
Unit:N Lot:N Section:25 Township:26S Range:26E
Feet from: 332 N/S Line:S
Feet from: 1932 E/W Line:W

6. latitude: 32.0199661 longitude: -104.2488251

7. County: Eddy

9. 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: 2/17/2016 Frac Performed by: Halliburton

12. Production Type:
O

13. Pool Code(s):
98018

14. Gross Fractured Interval:
7,544 ft to 11,850 ft

15. True Vertical Depth (TVD):
7,403 ft

16. Total Volume of Fluid Pumped:
5,093,808 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	(CA5 #) Chemical Abstract Service #	Maximum Ingredient Concentration in Additive (% by mass)	Maximum Ingredient Concentration in HF Fluid (% by mass)
Fresh Water	Operator	Base Fluid	Fresh Water	7732-18-5	100%	86.44778%
HYDROCHLORIC ACID	Halliburton	Base Fluid	NA	NA	0%	0%
BC-140, BE-9W, Cla-Web (TM), FE-1A ACIDIZING COMPOS	Halliburton	Additive, Biocide, Breaker, Concentrate, Corrosion Inhibitor, Crosslinker, Friction Reducer, Gelling	NA	NA	0%	0%
Scalechek(R) SCP-2 Scale Inhibitor, WG-36 GELLING	Halliburton	Scale Preventer, Surfactant	NA	NA	0%	0%
Parasorb, Scaletrol	Baker Hughes	Paraffin Inhibitor, Scale Inhibitor	NA	NA	0%	0%
			1,2-Benzisothiazolin-3-one	2634-33-5	0.1%	0%
			Acetic acid	64-19-7	60%	0.00222%
			Acetic anhydride	108-24-7	100%	0.00369%
			Alcohols ethoxylated	Confidential	5%	0.00089%
			Alcohols, C14-C15, ethoxylated	68951-67-7	30%	0.00019%
			Alkane	Confidential	1%	0.00046%
			Amide	Confidential	5%	0.00089%
			Amine salts	Confidential	0.1%	0.0001%
			Ammonium chloride	12125-02-9	5%	0.00089%
			Ammonium salt	Confidential	60%	0.02939%
			Bentonite, benzyl(hydrogenated tallow alkyl) dimethylammonium stearate complex	121888-68-4	5%	0.0066%
			C.I. Pigment Red 5	6410-41-9	1%	5E-05%
			Calcium chloride	10043-52-4	0.1%	0%
			Calcium Chloride (CaCl2)	10043-52-4	5%	0.00127%
			Citric acid	77-92-9	60%	0.0023%
			Complex alkylamine	Confidential	5%	0.00229%
			Crystalline silica, quartz	14808-60-7	100%	12.78957%
			Crystalline Silica, Quartz	14808-60-7	0.1%	0.00013%
			Crystalline Silica: Quartz	14808-60-7	1%	0.00011%
			Cured acrylic resin	Confidential	30%	0.0014%
			Diatomaceous Earth, calcined	91053-39-3	60%	0.00682%
			Enzyme	Confidential	5%	0.00023%
			Ethylene glycol	107-21-1	30%	0.0083%
			Ethylene Glycol	107-21-1	30%	0.00762%
			Ethylenediaminetetraacetic acid, tetrasodium salt	64-02-8	0.01%	0%
			Fatty acids, tall oil	Confidential	30%	0.00019%
			Glassy calcium magnesium phosphate	65997-17-3	100%	0.01421%
			Glycerine	56-81-5	10%	0.00458%
			Guar gum	9000-30-0	100%	0.13191%
			Hexamethylenetetramine	100-97-0	2%	0.05115%
			Hydrochloric acid	7647-01-0	60%	0.22642%
			Hydrogen peroxide	7722-84-1	0.01%	0%
			Hydrotreated light petroleum distillate	64742-47-8	30%	0.00533%
			Methanol	67-56-1	60%	0.00037%
			Mineral Oil	8042-47-5	30%	0.00341%
			Monoethanolamine borate	26038-87-9	60%	0.0166%
			Nitroacetic acid, trisodium salt monohydrate	5064-31-3	0.01%	0%
			Olefins	Confidential	5%	7E-05%
			Phenol / formaldehyde resin	9003-35-4	5%	0.12787%
			Poly(oxy-1,2-ethanediyl), ,alpha.-isodecyl-, omega.-hydroxy-	61827-42-7	30%	0.01374%
			Polyacrylamide copolymer	Confidential	30%	0.00533%
			Propargyl alcohol	107-19-7	10%	6E-05%
			Propylene glycol	57-55-6	60%	0.02665%
			Quaternary amine	Confidential	5%	0.00299%
			Reaction product of acetophenone, formaldehyde, thiourea and oleic acid in dimethyl formamide	68527-49-1	30%	0.00019%
			Silica gel	112926-00-8	1%	0.00132%
			Sodium bicarbonate	144-55-8	0.01%	0%
			Sodium chloride	7647-14-5	30%	0.00344%
			Sodium glycolate	2836-32-0	0.01%	0%
			Sodium hydroxide	1310-73-2	30%	0.00128%
			Sodium perborate tetrahydrate	10486-00-7	100%	0.002%
			Sorbitan monooleate	9005-65-6	1%	0.00018%
			polyoxyethylene derivative			
			Sorbitan, mono-9-octadecenoate, (Z)	1338-43-8	1%	0.00018%
			Surfactant mixture	Confidential	1%	0.00264%
			Tributyl tetradecyl phosphonium chloride	81741-28-8	10%	0.00444%
			Walnut hulls	NA	100%	0.00451%
			Water	7732-18-5	100%	0.53526%

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

Date: 3/31/2016

E-mail Address: sdavis@conchoresources.com

Printed Name: Stormi Davis

Title: Regulatory Analyst

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