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.
30-015-32976

2. Well Name:
ZARAFA FF FEDERAL #002

3. Well Number:
002

HYDRAULIC FRACTURING FLUID DISCLOSURE

☒ Original

☐ Amendment

4. Surface Hole Location:
Unit: K Lot: K Section: 12 Township: 21S Range: 24E
Feet from: 1650 N/S Line: S
Feet from: 2550 E/W Line: W

5. Bottom Hole Location:
Unit: K Lot: K Section: 12 Township: 21S Range: 24E
Feet from: 1650 N/S Line: S
Feet from: 2550 E/W Line: W

6. latitude: 32.4916661671514 longitude: -104.452443737414

7. County:
Eddy

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: 7/26/2013 Frac Performed by: Halliburton

12. Production Type:
O

13. Pool Code(s):
97443

14. Gross Fractured Interval:
7,048 ft to 7,180 ft

15. True Vertical Depth (TVD):
10,335 ft

16. Total Volume of Fluid Pumped:
82,146 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)
Fresh Water	Operator				100%	85.55915%
Premium White 16/30	Halliburton				100%	2.67007%
CRC 16/30	Halliburton				100%	11.30972%
HpH BREAKER	Halliburton	Breaker	Sodium chloride	7647-14-5	30%	0.00034%
Cla-Web™	Halliburton	Additive	Ammonium salt	Confidential Business Information	60%	0.02196%
BE-9	Halliburton	Biocide	Tributyl tetradecyl phosphonium chloride	81741-28-8	10%	0.00274%
Iosurf-360w	Halliburton				100%	0%
BC-140 X2	Halliburton	Initiator	Ethylene glycol	107-21-1	30%	0.03388%
			Monoethanolamine borate	26038-87-9	100%	0.11293%
MO-67	Halliburton	pH Control Additive	Sodium hydroxide	1310-73-2	30%	0.00318%
SUPERSET W	Halliburton	Activator	Methanol	67-56-1	60%	0.02754%
			Ethoxylated nonylphenol	Confidential Business Information	60%	0.02754%
FR-38	Halliburton	Friction Reducer	Acetic acid	64-19-7	5%	0.00025%
			Ammonium sulfate inorganic salt	Confidential Business Information	30%	0.00148%
WG-36 GELLING AGENT	Halliburton	Gelling Agent	Guar gum	9000-30-0	100%	0.14412%
OPTIFLO-HTE	Halliburton	Breaker	Crystalline silica, quartz	14808-60-7	30%	0.00262%
			Walnut hulls	Mixture	100%	0.00874%
Scalechek® SCP-2 Scale Inhibitor	Halliburton	Scale Preventer	Glassy calcium magnesium phosphate	65997-17-3	100%	0.06244%
OptiKleen-WF™	Halliburton	Concentrate	Sodium perborate tetrahydrate	10486-00-7	100%	0.00624%

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: Brian Maiorino Title: Regulatory Analyst

Date: 11/22/2013

E-mail Address: bmaiorino@concho.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.