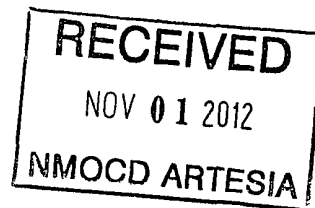


DRILLING INC. Oil Well Drilling Contractor

Post Office Box 160 Artesia, New Mexico 88211-0160 Office (575) 748-8704 Fax (575) 748-8719

June 1, 2012

30-015-40056



COG Operating, LLC
550 W. Texas, Suite 1300
Midland, Texas 79701

Re: Tarpan "33" Fee #1 H
Sec. 33, T-18-S, R-26-E
Eddy County, New Mexico

Attn: Jim Evans

The following is a Deviation Survey on the referenced well in Eddy County, New Mexico:

295' - 1°	955' - 1°	1353' - 1°	2258' - 0.25°
558' - 0.5°	1103' - 0.5°	1790' - 0.25°	

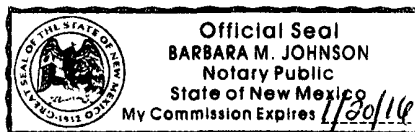
Sincerely,

Gary W. Chappell
Contracts Manager

STATE OF NEW MEXICO)
COUNTY OF EDDY)

The foregoing was acknowledged before me this 1st day of June, 2012 by Gary W. Chappell.

NOTARY PUBLIC



Company: COG OPERATING LLC (CONCHO)

Lease/Well: TARPAN 33 FEE /No. 001H



Rig Name: JW #4

State/County: NEW MEXICO/EDDY

Latitude: 32.70

GRID North is 0.03 Degrees West of True North

VS-Azi: 0.00 Degrees



Depth Reference : RKB = 14'

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: eline_ed.ut

Minimum Curvature Method

Report Date/Time: 6/1/2012 / 10:00

VAUGHN ENERGY SERVICES

CONWAY, ARKANSAS

501-730-0602

SURVEYOR: SLAYTON THOMAS

TARPAN 33 FEE NO. 001H / API 30-015-40056

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	****
100.00	0.23	178.92	100.00	-0.20	0.00	-0.20	0.20	178.92	0.23
200.00	0.30	185.85	200.00	-0.67	-0.02	-0.67	0.67	181.63	0.07
300.00	0.24	157.74	300.00	-1.13	0.03	-1.13	1.13	178.29	0.14
400.00	0.01	38.73	400.00	-1.32	0.12	-1.32	1.32	174.87	0.25
500.00	0.38	261.01	500.00	-1.36	-0.20	-1.36	1.38	188.41	0.38
600.00	0.19	198.93	600.00	-1.57	-0.58	-1.57	1.68	200.24	0.33
700.00	0.17	315.09	700.00	-1.63	-0.74	-1.63	1.79	204.35	0.31
800.00	0.30	260.93	799.99	-1.57	-1.10	-1.57	1.92	215.07	0.25
900.00	0.07	153.11	899.99	-1.67	-1.33	-1.67	2.13	218.66	0.33
1000.00	0.36	281.57	999.99	-1.66	-1.61	-1.66	2.32	224.21	0.41
1100.00	0.43	208.18	1099.99	-1.92	-2.10	-1.92	2.85	227.51	0.47
1200.00	0.09	91.89	1199.99	-2.25	-2.19	-2.25	3.14	224.21	0.48
1300.00	0.34	282.51	1299.99	-2.19	-2.40	-2.19	3.25	227.63	0.44
1400.00	0.17	206.72	1399.99	-2.26	-2.76	-2.26	3.57	230.73	0.34
1500.00	0.41	250.27	1499.99	-2.51	-3.16	-2.51	4.04	231.57	0.31
1600.00	0.18	328.30	1599.99	-2.50	-3.58	-2.50	4.36	235.10	0.41
1700.00	0.14	337.77	1699.99	-2.25	-3.71	-2.25	4.34	238.77	0.04
1800.00	0.10	107.81	1799.99	-2.16	-3.67	-2.16	4.26	239.57	0.22

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
1900.00	0.19	210.17	1899.99	-2.33	-3.68	-2.33	4.35	237.68	0.23
2000.00	0.18	132.22	1999.99	-2.57	-3.64	-2.57	4.46	234.76	0.23
2100.00	0.02	156.08	2099.99	-2.69	-3.52	-2.69	4.43	232.62	0.17
2200.00	0.26	221.71	2199.99	-2.87	-3.67	-2.87	4.66	231.94	0.25
2240.00	0.19	276.92	2239.99	-2.93	-3.79	-2.93	4.79	232.31	0.54

CRESCENT

DIRECTIONAL DRILLING

Minimum Curvature Calculation

Client: COG Operating LLC
Well: Tarpan 33 Fee 1H
County: Eddy
Rig: JW #4

M.W.D. OPERATORS: M.Rainey/C.Hall
DIRECTIONAL DRILLERS: D.Orona/D.Patterson
Tool Azimuth to Grid North: 7.92
Job #: PB-12313

Vertical Section Angle: 353.88

API#: 30-015-40056

Sur.#	Meas. Depth	Inc.	Azm.	T.V.D.	Ver.Sect.	+N/-S	+E/-W	DLS
Tie In	2240.00	0.19	276.92	2239.98	-2.39	-2.70	-2.73	
1	2311.00	0.20	217.50	2310.98	-2.46	-2.78	-2.92	0.27
2	2342.00	1.80	340.50	2341.97	-2.02	-2.37	-3.12	6.18
3	2373.00	5.50	348.20	2372.91	-0.07	-0.45	-3.58	12.01
4	2404.00	9.10	350.00	2403.65	3.86	3.42	-4.31	11.63
5	2435.00	12.70	353.30	2434.09	9.71	9.22	-5.14	11.78
6	2467.00	16.50	353.20	2465.05	17.78	17.22	-6.09	11.88
7	2498.00	20.20	352.50	2494.47	27.53	26.91	-7.31	11.96
8	2529.00	23.60	351.70	2523.22	39.09	38.36	-8.90	11.01
9	2561.00	26.70	349.60	2552.19	52.66	51.77	-11.12	10.08
10	2592.00	29.60	345.90	2579.52	67.19	66.05	-14.25	10.91
11	2623.00	32.70	342.10	2606.05	82.98	81.45	-18.69	11.84
12	2654.00	35.90	338.60	2631.66	99.95	97.88	-24.58	12.12
13	2685.00	39.40	335.90	2656.20	118.08	115.33	-31.92	12.48
14	2717.00	42.80	334.20	2680.31	137.98	134.40	-40.80	11.18
15	2748.00	45.70	333.10	2702.52	158.27	153.78	-50.40	9.68
16	2779.00	48.90	332.10	2723.54	179.50	174.00	-60.89	10.59
17	2810.00	51.90	332.20	2743.29	201.68	195.11	-72.05	9.68
18	2841.00	54.90	331.50	2761.77	224.75	217.05	-83.79	9.85
19	2872.00	57.90	330.00	2778.93	248.49	239.58	-96.41	10.48
20	2903.00	60.00	329.20	2794.92	272.70	262.48	-109.85	7.13
21	2935.00	62.30	329.20	2810.36	298.16	286.55	-124.20	7.19
22	2966.00	65.60	327.70	2823.97	323.31	310.28	-138.77	11.50
23	2997.00	70.20	326.60	2835.63	348.95	334.40	-154.35	15.20
24	3029.00	74.80	325.90	2845.25	375.98	359.77	-171.31	14.53
25	3060.00	79.40	326.10	2852.17	402.68	384.81	-188.20	14.85
26	3090.00	82.50	326.80	2856.89	428.98	409.50	-204.57	10.59
27	3121.00	85.20	327.30	2860.21	456.48	435.36	-221.33	8.86
28	3152.00	88.50	327.10	2861.91	484.13	461.38	-238.10	10.66
29	3184.00	91.30	327.50	2861.97	512.75	488.30	-255.38	8.84
30	3215.00	91.80	328.50	2861.13	540.63	514.58	-271.80	3.61
31	3246.00	91.50	330.30	2860.24	568.83	541.25	-287.58	5.88
32	3308.00	91.70	332.90	2858.50	626.17	595.77	-317.05	4.20
33	3402.00	93.40	334.20	2854.32	714.22	679.84	-358.88	2.28
34	3496.00	93.30	336.80	2848.83	803.27	765.22	-397.79	2.76
35	3589.00	93.10	339.60	2843.64	892.66	851.43	-432.27	3.01
36	3683.00	93.40	343.30	2838.30	984.29	940.38	-462.12	3.94
37	3776.00	93.80	347.40	2832.46	1076.06	1030.16	-485.59	4.42
38	3870.00	94.10	350.50	2825.99	1169.48	1122.19	-503.56	3.31
39	3964.00	94.10	354.60	2819.26	1263.19	1215.14	-515.72	4.35

CRESCENT

DIRECTIONAL DRILLING

Minimum Curvature Calculation

Client: COG Operating LLC
Well: Tarpan 33 Fee 1H
County: Eddy
Rig: JW #4

M.W.D. OPERATORS: M.Rainey/C.Hall
DIRECTIONAL DRILLERS: D.Orona/D.Patterson
Tool Azimuth to Grid North: 7.92
Job #: PB-12313

Vertical Section Angle: 353.88

API#: 30-015-40056

Sur #	Meas Depth	Inc.	Azm	T.V.D.	Ver.Sect.	+N/-S	+E/-W	DLS
40	4057.00	93.40	358.40	2813.18	1355.88	1307.75	-521.38	4.15
41	4151.00	93.30	1.20	2807.68	1449.21	1401.58	-521.71	2.98
42	4244.00	93.30	1.10	2802.33	1541.31	1494.40	-519.84	0.11
43	4338.00	92.90	0.50	2797.25	1634.49	1588.26	-518.53	0.77
44	4432.00	94.50	1.80	2791.18	1727.53	1682.04	-516.65	2.19
45	4525.00	94.50	1.40	2783.88	1819.40	1774.71	-514.06	0.43
46	4619.00	94.10	1.10	2776.84	1912.36	1868.43	-512.02	0.53
47	4712.00	93.60	0.40	2770.59	2004.49	1961.21	-510.80	0.92
48	4806.00	93.80	0.00	2764.53	2097.72	2055.01	-510.48	0.47
49	4900.00	91.80	0.50	2759.93	2191.02	2148.89	-510.07	2.19
50	4994.00	91.70	0.40	2757.06	2284.36	2242.85	-509.33	0.15
51	5087.00	92.00	0.20	2754.06	2376.73	2335.80	-508.84	0.39
52	5181.00	92.00	359.80	2750.78	2470.14	2429.74	-508.84	0.43
53	5274.00	92.00	359.50	2747.53	2562.61	2522.68	-509.41	0.32
54	5368.00	93.40	0.50	2743.11	2655.97	2616.57	-509.41	1.83
55	5462.00	93.60	0.70	2737.37	2749.15	2710.39	-508.43	0.30
56	5555.00	93.30	0.90	2731.77	2841.30	2803.21	-507.13	0.39
57	5649.00	93.30	0.70	2726.36	2934.46	2897.05	-505.82	0.21
58	5742.00	93.40	0.50	2720.93	3026.67	2989.88	-504.85	0.24
59	5836.00	93.10	359.80	2715.60	3119.95	3083.73	-504.60	0.81
60	5929.00	92.00	0.90	2711.46	3212.27	3176.64	-504.04	1.67
61	6022.00	92.70	1.10	2707.65	3304.47	3269.54	-502.41	0.78
62	6116.00	92.90	1.10	2703.05	3397.62	3363.41	-500.61	0.21
63	6210.00	93.60	1.40	2697.72	3490.69	3457.24	-498.56	0.81
64	6303.00	93.10	0.00	2692.29	3582.87	3550.07	-497.43	1.60
65	6397.00	93.30	0.00	2687.04	3676.19	3643.92	-497.43	0.21
66	6491.00	93.60	0.40	2681.39	3769.45	3737.75	-497.10	0.53
67	6584.00	92.60	359.10	2676.36	3861.82	3830.61	-497.51	1.76
68	6678.00	92.60	359.11	2672.09	3955.33	3924.50	-498.98	0.01
69	6793.00	93.30	359.00	2666.17	4069.71	4039.34	-500.87	0.62
70	6886.00	93.60	359.00	2660.58	4162.17	4132.15	-502.49	0.32
71	6980.00	93.80	358.80	2654.51	4255.62	4225.94	-504.29	0.30
72	7073.00	93.30	358.40	2648.75	4348.12	4318.73	-506.56	0.69
73	7167.00	93.30	358.10	2643.34	4441.70	4412.53	-509.42	0.32
74	7261.00	93.40	358.30	2637.85	4535.27	4506.33	-512.37	0.24
75	7354.00	93.60	358.60	2632.17	4627.80	4599.12	-514.88	0.39
76	7448.00	93.40	358.40	2626.43	4721.32	4692.91	-517.34	0.30
77	7546.00	93.40	358.10	2620.62	4818.86	4790.69	-520.33	0.31
BHL	7604.00	93.40	358.10	2617.18	4876.60	4848.56	-522.25	0.00