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30-015-38145

October 11, 2010

COG, LLC
Fasken Center, Tower II
550 West Texas Ave, Suite 1300
Midland, TX 79701

RE: Miranda Federal #19 H
150' FNL & 1675' FWL
Sec. 9, T17S, R30E
Eddy County, New Mexico

Dear Sir,

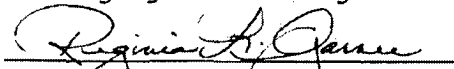
The attached is the Deviation Survey for the above captioned well.

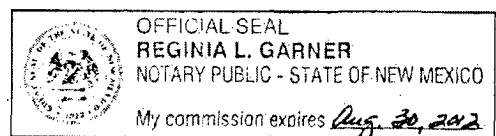
Very truly yours,


Eddie C. LaRue
Operations Manager

State of New Mexico }
County of Eddy }

The foregoing was acknowledged before me this 11th day of October, 2010.


Regina L. Garner
Notary Public



Miranda Federal #19

Date	Depth	Dev/Inc	Dir/AZ
9/14/2010	250	0.20	0.00
9/14/2010	411	0.60	0.00
9/15/2010	713	0.40	0.00
9/16/2010	1207	0.90	0.00
9/16/2010	1363	0.80	0.00
9/17/2010	1438	0.95	110.80
9/17/2010	1470	1.11	111.40
9/17/2010	1563	1.76	146.40
9/17/2010	1657	2.91	169.20
9/17/2010	1751	4.68	185.80
9/17/2010	1845	4.81	188.90
9/18/2010	1939	5.03	183.40
9/18/2010	2034	5.45	181.50
9/18/2010	2128	5.42	181.60
9/18/2010	2691	4.60	188.70
9/18/2010	2879	5.56	179.40
9/18/2010	3067	6.41	182.00
9/18/2010	3160	5.89	179.10
9/18/2010	3255	6.05	178.20
9/18/2010	3349	5.01	171.30
9/18/2010	3442	5.04	175.80
9/19/2010	5336	4.83	179.75
9/19/2010	3630	4.03	175.30
9/19/2010	3723	4.25	176.00
9/19/2010	3817	4.75	178.50
9/19/2010	3911	5.21	183.20
9/20/2010	4217	18.15	128.46
9/20/2010	4312	25.19	106.80
9/21/2010	4375	29.19	94.79
9/21/2010	4407	31.35	91.64
9/21/2010	4438	34.08	91.83
9/22/2010	4470	36.98	97.25
9/26/2010	4690	61.42	88.74
9/26/2010	4873	70.72	89.50
9/26/2010	4785	74.06	89.45
9/26/2010	4817	77.14	89.00
9/26/2010	4849	78.64	89.00
9/26/2010	4880	78.95	89.00
9/26/2010	4912	81.67	89.90
9/27/2010	4944	84.85	90.26
9/27/2010	4976	88.15	90.41
9/27/2010	5008	88.08	90.25
9/27/2010	5103	87.11	90.57
9/27/2010	5195	88.42	89.72
9/27/2010	5294	88.18	90.04
9/27/2010	5389	87.78	88.97
9/27/2010	5484	87.38	88.94
9/27/2010	5675	87.51	87.67
9/27/2010	5770	87.10	87.65
9/28/2010	5865	88.86	86.97

Date	Depth	Dev/Inc	Dir/AZ
9/28/2010	5960	89.66	88.68
9/28/2010	6056	90.37	89.46
9/28/2010	6152	89.36	88.94
9/28/2010	6247	88.69	88.79
9/29/2010	6342	87.85	88.04
9/29/2010	6437	88.12	89.74
9/29/2010	6532	86.84	89.22
9/29/2010	6628	86.68	88.32
9/29/2010	6723	85.60	87.48
9/30/2010	6819	88.22	88.06
9/30/2010	6914	87.62	89.65
9/30/2010	7009	88.18	89.64
9/30/2010	7104	88.69	89.87
9/30/2010	7200	88.66	89.98
9/30/2010	7295	87.95	89.84
9/30/2010	7389	87.20	90.15