

PATRIOT DRILLING, LLC

30-015-39472

OPERATOR: COG Operating, LLC
WELL/LEASE: Magura 8 Federal # 4 H
COUNTY: Eddy Co., New Mexico
Sec. 8, T26S, R26E

**STATE OF NEW MEXICO
DEVIATION REPORT**

<u>Depth</u>	<u>Deviation</u>	<u>Depth</u>	<u>Deviation</u>
160	1/2	4,703	1/2
374	3/4	5,148	3/4
430	3/4	5,616	2
688	1 1/4	5,835	1 1/2
974	1 3/4	6,093	1
1,259	1	6,283	1 1/4
1,640	2	6,642	1
2,298	1/2	6,664	1
3,279	3/4		
3,752	1 1/4		
4,328	3/4		

RECEIVED

FEB 06 2013

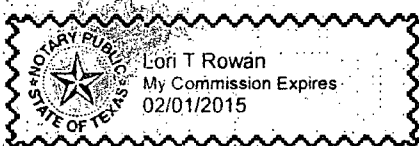
NMOCD ARTESIA

Patriot Drilling, LLC

M. Leroy Peterson, Executive Vice-
President

The foregoing instrument was acknowledged before me on this 2nd day of
December, 2012 by M. Leroy Peterson, Executive Vice-President of Patriot Drilling,

My Commission Expires: 02/01/2015

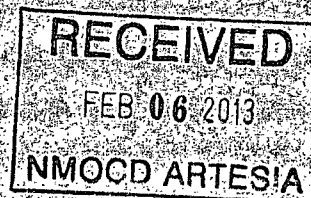


Lori T. Rowan
Notary Public for Ector Co., Texas



PO Box 261021
Corpus Christi, Texas 78426
(361) 767-0602 • (800) 606-GYRO • Fax (361) 767-0612

December 3, 2012



COG Operating LLC (Concho)
One Concho Center
600 W. Illinois Avenue
Midland, Texas 79701

Attn: Kanica Castillo

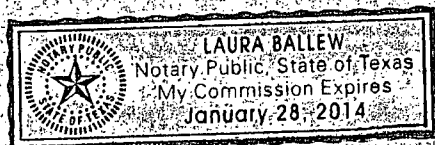
RE: **Magura 8 Federal No. 004H**

Please find enclosed a copy of the survey from 0.00' to 6600.00' ran on the above referenced well.

If I can be of any further service please do not hesitate to call me at 800-606-4976.

STATE OF TEXAS §
COUNTY OF NUECES §

This instrument was acknowledged before me on the 6th day of December, A.D. 2012, by Keith Havelka.



Laura Ballew
Notary Public, State of Texas

Sincerely,

Keith Havelka
Operations

Company: COG Operating LLC (Concho)

Lease/Well: Magura 8 Federal / No. 004H



Rig Name: Patriot 2

State/County: New Mexico / Eddy

Latitude: 32.06, Longitude: -104.32

GRID North is 0.01 Degrees East of True North

VS-Azi: 180.66 Degrees



Depth Reference : RKB= 18'

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: gyro_survey.ut

Minimum Curvature Method

Report Date/Time: 12/3/2012 / 14:00

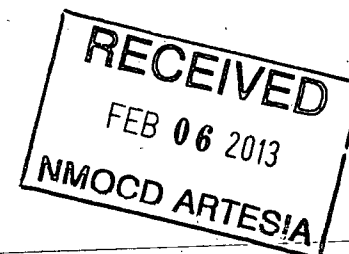
Vaughn Energy Services

Gardendale, Texas

(432) 563-5444

Surveyor: Colby Ware

Magura 8 Federal No. 004H / API 30-015-39472



Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W 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	****
100:00	0.25	281.68	100.00	0:04	-0.22	0.22	281.68	0.25
200:00	0.46	336.24	200:00	0.46	-0.59	0.75	307.59	0.38
300:00	0.67	334:25	299:99	1.35	-1:01	1.69	323:25	0.21
400:00	0.90	332.26	399:98	2:58	-1.63	3.06	327.67	0.23
500:00	1:02	327.40	499.97	4.03	-2.48	4.74	328.38	0.14
600:00	1.14	322:55	599.95	5:58	-3.57	6.62	327.37	0.15
700:00	1.40	314:65	699:93	7.23	-5.05	8.81	325.08	0.31
800:00	1.66	306:76	799:89	8.95	-7.08	11.41	321:68	0.33
900:00	1:80	278:50	899:85	10:05	-9.79	14.03	315.77	0.85
1000:00	1:93	250:24	999:80	9.71	-12.93	16.17	306.92	0.92
1100:00	1.20	241:04	1099:76	8.63	-15:43	17.68	299:22	0.77
1200:00	0.48	231:83	1199:75	7.87	-16.68	18.44	295:25	0.74
1300:00	0:77	178:30	1299:74	6.94	-16.99	18.35	292.22	0.62
1400:00	1.06	124.77	1399.73	5.74	-16.20	17.19	289.50	0.87
1500:00	1.62	112.60	1499.70	4.67	-14.14	14.89	288.27	0.62
1600:00	2.17	100.44	1599:65	3.78	-10:97	11.61	289.01	0.68
1700:00	1.84	103:78	1699:59	3.06	-7.55	8.15	292.03	0.35
1800:00	1.53	107:12	1799:54	2.28	-4.72	5.24	295.79	0.33

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
1900.00	1.25	108.18	1899.51	1.55	-2.41	2.86	302.72	0.28
2000.00	0.96	109.23	1999.50	0.93	-0.58	1.10	328.02	0.30
2100.00	0.67	116.83	2099.49	0.39	0.73	0.83	61.49	0.31
2200.00	0.38	124.42	2199.48	-0.05	1.51	1.52	92.03	0.30
2300.00	0.33	146.99	2299.48	-0.48	1.94	2.00	103.85	0.15
2400.00	0.28	169.56	2399.48	-0.96	2.14	2.35	114.10	0.13
2500.00	0.54	183.17	2499.48	-1.67	2.16	2.73	127.66	0.27
2600.00	0.80	196.78	2599.47	-2.80	1.93	3.40	145.40	0.30
2700.00	0.92	200.78	2699.46	-4.22	1.45	4.46	161.08	0.14
2800.00	1.07	204.78	2799.44	-5.81	0.77	5.87	172.44	0.16
2900.00	0.96	208.10	2899.43	-7.40	-0.01	7.40	180.12	0.12
3000.00	0.86	211.42	2999.41	-8.79	-0.80	8.82	185.23	0.11
3100.00	0.85	208.62	3099.40	-10.08	-1.55	10.20	188.75	0.05
3200.00	0.85	207.83	3199.39	-11.39	-2.25	11.61	191.19	0.01
3300.00	0.97	212.50	3299.38	-12.76	-3.06	13.12	193.47	0.14
3400.00	1.10	217.17	3399.36	-14.24	-4.09	14.82	196.03	0.15
3500.00	1.05	214.06	3499.35	-15.76	-5.18	16.59	198.21	0.08
3600.00	1.00	210.96	3599.33	-17.27	-6.15	18.33	199.59	0.07
3700.00	1.09	207.42	3699.31	-18.86	-7.03	20.13	200.45	0.11
3800.00	1.20	203.88	3799.29	-20.66	-7.89	22.12	200.91	0.13
3900.00	1.18	206.04	3899.27	-22.54	-8.77	24.18	201.26	0.05
4000.00	1.18	208.20	3999.25	-24.36	-9.70	26.23	201.71	0.04
4100.00	1.08	201.47	4099.23	-26.15	-10.53	28.19	201.94	0.17
4200.00	0.98	194.75	4199.21	-27.85	-11.10	29.98	201.72	0.16
4300.00	1.23	194.78	4299.20	-29.72	-11.59	31.90	201.30	0.26
4400.00	1.51	194.82	4399.17	-32.03	-12.20	34.27	200.85	0.28
4500.00	1.39	179.40	4499.14	-34.51	-12.52	36.72	199.94	0.41
4600.00	1.27	163.98	4599.11	-36.79	-12.21	38.76	198.36	0.38
4700.00	1.36	169.27	4699.08	-39.01	-11.68	40.72	196.67	0.15
4800.00	1.45	174.56	4799.05	-41.43	-11.34	42.96	195.31	0.16
4900.00	1.49	178.75	4899.02	-43.99	-11.19	45.39	194.28	0.11
5000.00	1.55	182.94	4998.99	-46.64	-11.23	47.97	193.54	0.13
5100.00	1.33	181.39	5098.95	-49.15	-11.33	50.44	192.98	0.22
5200.00	1.09	179.83	5198.93	-51.26	-11.36	52.50	192.49	0.24
5300.00	1.37	155.17	5298.91	-53.30	-10.85	54.39	191.51	0.59
5400.00	1.65	130.50	5398.87	-55.32	-9.25	56.09	189.50	0.70
5500.00	1.76	127.83	5498.83	-57.20	-6.95	57.62	186.92	0.13
5600.00	1.86	125.15	5598.78	-59.08	-4.41	59.24	184.26	0.14
5700.00	2.05	129.84	5698.72	-61.16	-1.70	61.18	181.60	0.24

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
5800.00	2.23	134.54	5798.65	-63.66	1.05	63.67	179.05	0.25
5900.00	1.78	121.02	5898.59	-65.83	3.77	65.94	176.72	0.65
6000.00	1.34	107.49	5998.55	-66.99	6.22	67.27	174.69	0.58
6100.00	1.05	105.60	6098.53	-67.58	8.22	68.08	173.06	0.29
6200.00	0.78	103.71	6198.52	-67.99	9.76	68.69	171.83	0.27
6300.00	1.01	91.97	6298.51	-68.18	11.30	69.11	170.59	0.30
6400.00	1.25	80.23	6398.49	-68.03	13.27	69.31	168.96	0.33
6500.00	1.65	82.88	6498.46	-67.66	15.78	69.48	166.88	0.41
6600.00	1.36	90.89	6598.42	-67.50	18.40	69.96	164.76	0.36



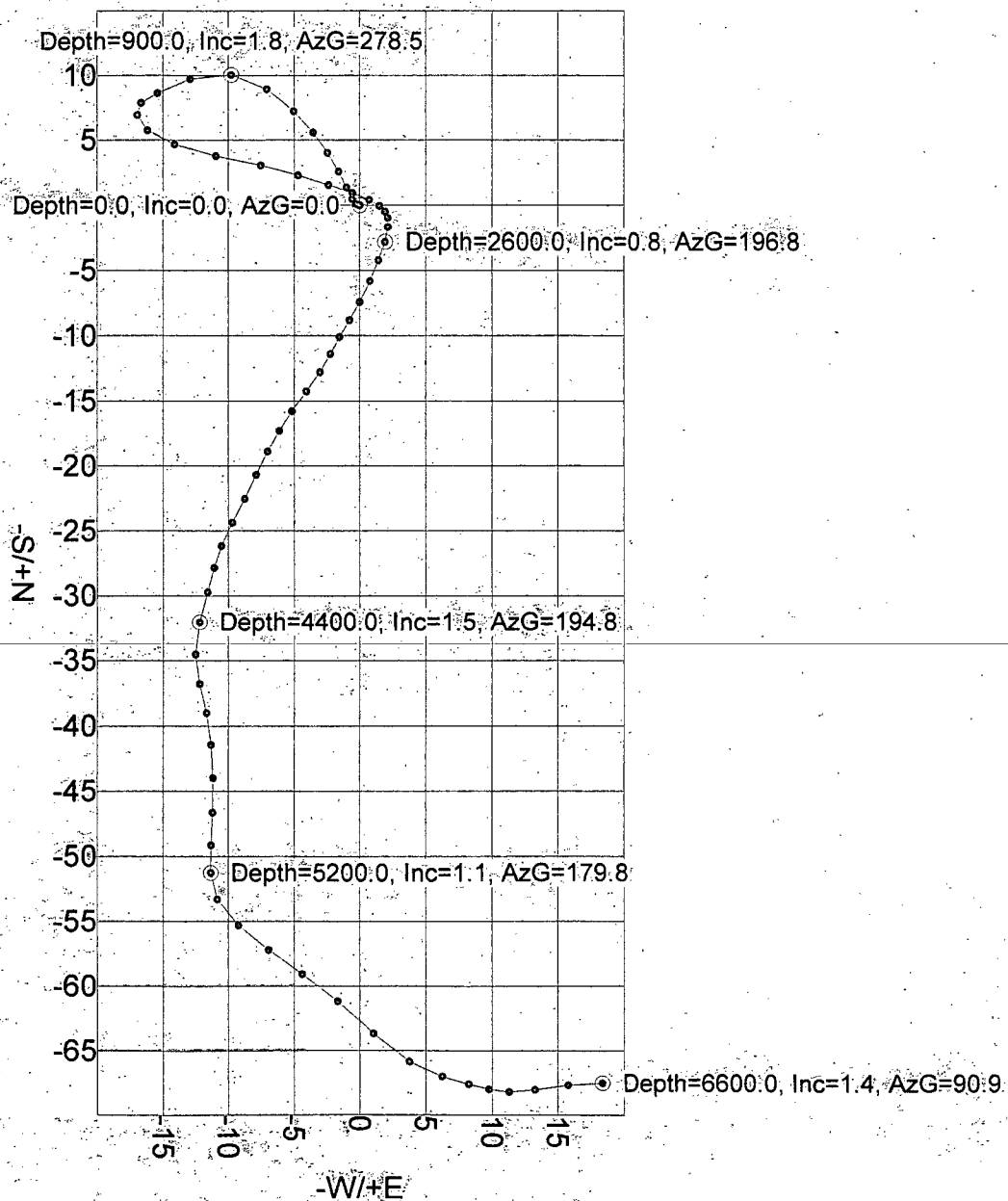
Vaughn Energy Services

Gardendale, Texas

(432) 563-5444

Surveyor: Colby Ware

Magura 8 Federal No. 004H / API 30-015-39472



VES Survey Date 11/24/2012



Archer Directional Drilling Services
911 Regional Park Drive
Houston, Texas 77060
Tel: 281-934-9600
Fax: 281-951-2101

COG Operating, LLC
One Concho Center
600 W. Illinois Avenue
Midland, Texas 79701

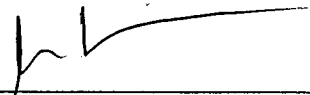
December 4, 2012

Re: COG Operating, LLC
Magura 8 Federal 4H
Field: Wildcat
Rig: Patriot #2
Eddy County, New Mexico
API # 30-015-39472

Enclosed please find the original of the surveys performed on the referenced well by Archer Directional Drilling Services. Other information required by your office is as follows:

<u>Name & Title Of Surveyor</u>	<u>Wellhole Number</u>	<u>Survey Depths</u>	<u>Dates Performed</u>	<u>Type Survey</u>
Geo Davila Field Engineer	Original Hole	374-1809 6664-11580	11/17/12-11/28/12	MWD

If additional information is required, please contact the undersigned at the letterhead address and phone number.



Amador Baggerly
MWD Coordinator



Archer Directional Drilling Services.
911 Regional Park Drive
Houston, Texas 77060
Tel: 281-934-9600
Fax: 281-951-2101

MWD Survey Certification

State of New Mexico
County of Eddy

I, Amador Baggerly, certify that; I am employed by Archer Directional Drilling Services; that I did on the day(s) of 11/17/12 through 11/28/12, conduct or supervise the taking of MWD surveys: **Survey 1:** from a depth of 374 feet to a depth of 1809 feet; **Survey 2:** from a depth of 6664 feet to a depth of 11580 feet; that the data is true, correct, complete and within the limitations of the tool as set forth by Archer Directional Drilling Services; that I am authorized and qualified to make this report; that these surveys were conducted at the request of COG Operating, LLC for the Magura 8 Federal 4H (API # 30-015-39472), Well located in Eddy County, New Mexico; and that I have reviewed this report and find that it conforms to the principles and procedures as set forth by Archer Directional Drilling Services.

A handwritten signature in black ink, appearing to read "Amador Baggerly", written over a horizontal line.

Amador Baggerly
MWD Coordinator



Company: COG Operating, LLC

Job Number:

03983-433-22

Calculation Method

Minimum Curvature

Well: Magura 8 Fed 4H

Mag Decl.:

7.73

Proposed Azimuth

180.7

Location: Eddy County, New Mexico

Dir Driller:

Levi Galvin

Depth Reference

KRG

Rig: Patriot 2

MWD/Eng:

Geo Davila

Tie Into: Assumed Vertical

Job Date: 11/17/12 - 11/28/12

Survey Number	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates		Closure		Dogleg Severity (d/100')	Build Rate (d/100')	Walk Rate (d/100')
							N/S (ft)	E/W (ft)	Distance (ft)	Direction Azimuth			
Tie In	274.00	0.7	343.3	0	274	0	0.00	0	0.00	0			
1	374	0.7	343.3	100	373.99	-1.17	1.17 N	0.35 W	1.22	343.30	0.00	0.00	0.00
2	430	0.7	328.9	56	429.99	-1.78	1.79 N	0.63 W	1.90	340.73	0.31	0.00	-25.71
3	516	0.7	328.1	86	515.98	-2.67	2.69 N	1.18 W	2.93	336.38	0.01	0.00	-0.93
4	603	1.1	321.3	87	602.97	-3.77	3.79 N	1.98 W	4.27	332.44	0.48	0.46	-7.82
5	688	1.5	322.8	85	687.95	-5.28	5.31 N	3.16 W	6.18	329.25	0.47	0.47	-1.76
6	783	2.8	355.9	95	782.88	-8.57	8.62 N	4.08 W	9.53	334.67	1.84	1.37	-34.84
7	879	1.8	251.8	96	878.84	-10.42	10.49 N	5.68 W	11.93	331.56	3.83	-1.04	-108.44
8	974	1.7	246.7	95	973.79	-9.37	9.46 N	8.39 W	12.65	318.44	0.19	-0.11	-5.37
9	1069	1.6	253.8	95	1068.75	-8.41	8.54 N	10.96 W	13.89	307.91	0.24	-0.11	7.47
10	1164	0.7	227.4	95	1163.73	-7.63	7.77 N	12.66 W	14.85	301.55	1.08	-0.95	-27.79
11	1259	0.8	136.9	95	1258.73	-6.75	6.90 N	12.63 W	14.39	298.63	1.12	0.11	-95.26
12	1354	0.7	119.9	95	1353.72	-5.99	6.12 N	11.68 W	13.18	297.67	0.26	-0.11	-17.89
13	1450	1.9	106.7	96	1449.69	-5.26	5.37 N	9.64 W	11.04	299.12	1.28	1.25	-13.75
14	1544	2.2	106.6	94	1543.63	-4.33	4.41 N	6.42 W	7.79	304.47	0.32	0.32	-0.11
15	1640	1.9	103.7	96	1639.57	-3.47	3.51 N	3.11 W	4.69	318.42	0.33	-0.31	-3.02
16	1761	1.5	109.6	121	1760.52	-2.50	2.50 N	0.33 E	2.52	7.52	0.36	-0.33	4.88
Proj	1809	1.5	109.6	48	1808.50	-2.09	2.08 N	1.51 E	2.57	36.08	0.00	0.00	0.00



Company: COG Operating, LLC

Job Number: 03983-433-22

Calculation Method

Minimum Curvature

Well: Magura 8 Fed 4H

Mag Decl.: 7.73

Proposed Azimuth

180.7

Location: Eddy County, New Mexico

Dir Driller: Levi Galvin

Depth Reference

KBG

Rig: Patriot 2

MWD Eng: Geo Davila

Tie Into: Previous MWD Survey

Job Date: 11/17/12 - 11/28/12

Survey Number	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates		Closure		Dogleg Severity (d/100')	Build Rate (d/100')	Walk Rate (d/100')
							N/S (ft)	E/W (ft)	Distance (ft)	Direction Azimuth			
Tie In	6600.00	1.36	90.89	0	6598.42	67.28	67.50 S	18.40 E					
1	6664	0.9	71.5	64	6662.41	67.12	67.35 S	19.64 E	70.16	163.75	0.92	-0.72	-30.30
2	6696	1.5	120.7	32	6694.40	67.25	67.49 S	20.23 E	70.45	163.31	3.56	1.88	153.75
3	6728	5.6	171.3	32	6726.34	69.00	69.24 S	20.83 E	72.31	163.26	14.97	12.81	158.13
4	6759	9.3	170.9	31	6757.07	72.96	73.21 S	21.46 E	76.29	163.67	11.94	11.94	-1.29
5	6790	13.2	169.8	31	6787.47	78.91	79.17 S	22.48 E	82.30	164.15	12.60	12.58	-3.55
6	6821	16.9	171.6	31	6817.40	86.84	87.12 S	23.77 E	90.30	164.74	12.03	11.94	5.81
7	6852	20.2	172.0	31	6846.79	96.58	96.88 S	25.17 E	100.09	165.44	10.65	10.65	1.29
8	6884	23.6	173.1	32	6876.47	108.40	108.71 S	26.71 E	111.94	166.20	10.70	10.63	3.44
9	6916	27.0	175.2	32	6905.40	121.98	122.31 S	28.09 E	125.50	167.07	10.99	10.63	6.56
10	6947	30.2	176.1	31	6932.61	136.76	137.11 S	29.20 E	140.18	167.98	10.42	10.32	2.90
11	6979	32.8	177.5	32	6959.90	153.44	153.80 S	30.13 E	156.72	168.92	8.44	8.12	4.38
12	7010	35.6	178.3	31	6985.53	170.85	171.21 S	30.76 E	173.95	169.81	9.15	9.03	2.58
13	7042	39.4	177.2	32	7010.92	190.30	190.67 S	31.54 E	193.26	170.61	12.06	11.88	-3.44
14	7074	42.9	175.7	32	7035.01	211.29	211.68 S	32.85 E	214.22	171.18	11.36	10.94	-4.69
15	7105	46.2	176.5	31	7057.10	232.97	233.38 S	34.32 E	235.89	171.63	10.80	10.65	2.58
16	7137	50.2	178.1	32	7078.42	256.77	257.20 S	35.44 E	259.63	172.15	13.04	12.50	5.00
17	7169	53.5	178.6	32	7098.19	281.92	282.35 S	36.16 E	284.66	172.70	10.39	10.31	1.56
18	7201	55.8	178.4	32	7116.70	308.00	308.44 S	36.84 E	310.63	173.19	7.21	7.19	-0.62
19	7232	59.0	176.1	31	7133.40	334.06	334.52 S	38.11 E	336.68	173.50	12.07	10.32	-7.42
20	7256	62.7	175.0	24	7145.09	354.93	355.41 S	39.74 E	357.63	173.62	15.93	15.42	-4.58
21	7288	66.8	175.2	32	7158.74	383.73	384.24 S	42.21 E	386.55	173.73	12.82	12.81	0.62
22	7320	69.1	176.4	32	7170.75	413.28	413.82 S	44.38 E	416.19	173.88	7.98	7.19	3.75
23	7351	71.6	176.7	31	7181.17	442.40	442.96 S	46.13 E	445.36	174.05	8.12	8.06	0.97
24	7383	73.8	176.8	32	7190.69	472.88	473.46 S	47.86 E	475.87	174.23	6.88	6.88	0.31
25	7415	76.9	176.9	32	7198.78	503.77	504.37 S	49.56 E	506.80	174.39	9.69	9.69	0.31
26	7446	80.0	178.1	31	7204.99	534.09	534.71 S	50.89 E	537.13	174.56	10.69	10.00	3.87
27	7478	82.2	179.0	32	7209.94	565.68	566.31 S	51.69 E	568.67	174.79	7.42	6.88	2.81
28	7510	84.2	179.8	32	7213.73	597.44	598.08 S	52.02 E	600.34	175.03	6.72	6.25	2.50
29	7542	85.3	179.6	32	7216.66	629.31	629.95 S	52.19 E	632.11	175.26	3.49	3.44	-0.63
30	7573	86.8	180.4	31	7218.79	660.23	660.87 S	52.19 E	662.93	175.49	5.48	4.84	2.58
31	7605	88.9	181.1	32	7219.99	692.20	692.85 S	51.77 E	694.78	175.73	6.92	6.56	2.19
32	7637	90.1	180.9	32	7220.27	724.20	724.84 S	51.21 E	726.65	175.96	3.80	3.75	-0.62
33	7732	90.2	180.8	95	7220.02	819.20	819.83 S	49.80 E	821.34	176.52	0.15	0.11	-0.11
34	7827	90.1	180.3	95	7219.77	914.20	914.82 S	48.89 E	916.13	176.94	0.54	0.11	-0.53
35	7922	89.2	181.8	95	7220.35	1009.19	1009.80 S	47.15 E	1010.90	177.33	1.84	0.95	1.58
36	8017	90.4	181.8	95	7220.69	1104.17	1104.75 S	44.16 E	1105.64	177.71	1.26	1.26	0.00



Company: COG Operating, LLC

Job Number:

03983-433-22

Calculation Method

Minimum Curvature

Well: Magura 8 Fed 4H

Mag Decl.:

7.73

Proposed Azimuth

180.7

Location: Eddy County, New Mexico

Dir Driller:

Levi Galvin

Depth Reference

KBG

Rig: Patriot 2

MWD Eng:

Geo Davila

Tie Into: Previous MWD Survey

Job Date: 11/17/12 - 11/28/12

Survey Number	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates		Closure		Dogleg Severity (d/100')	Build Rate (d/100')	Walk Rate (d/100')
							N/S (ft)	E/W (ft)	Distance (ft)	Direction Azimuth			
37	8112	90.5	181.3	95	7219.94	1199.16	1199.71 S	41.59 E	1200.44	178.01	0.54	0.11	-0.53
38	8206	90.7	181.1	94	7218.96	1293.15	1293.69 S	39.62 E	1294.30	178.25	0.30	0.21	-0.21
39	8302	89.2	181.5	96	7219.04	1389.14	1389.66 S	37.45 E	1390.17	178.46	1.62	-1.56	0.42
40	8396	89.0	181.1	94	7220.52	1483.12	1483.63 S	35.31 E	1484.05	178.64	0.48	-0.21	-0.43
41	8491	89.8	182.2	95	7221.51	1578.10	1578.58 S	32.58 E	1578.91	178.82	1.43	0.84	1.16
42	8586	89.7	181.8	95	7221.92	1673.07	1673.52 S	29.26 E	1673.78	179.00	0.43	-0.11	-0.42
43	8681	89.7	181.5	95	7222.42	1768.06	1768.48 S	26.53 E	1768.68	179.14	0.32	0.00	-0.32
44	8776	89.6	181.4	95	7223.00	1863.04	1863.45 S	24.12 E	1863.60	179.26	0.15	-0.11	-0.11
45	8870	90.5	182.1	94	7222.92	1957.03	1957.40 S	21.25 E	1957.52	179.38	1.21	0.96	0.74
46	8965	90.8	182.5	95	7221.84	2051.98	2052.32 S	17.44 E	2052.39	179.51	0.53	0.32	0.42
47	9060	91.3	182.2	95	7220.10	2146.92	2147.22 S	13.55 E	2147.26	179.64	0.61	0.53	-0.32
48	9155	91.5	181.5	95	7217.78	2241.87	2242.14 S	10.48 E	2242.17	179.73	0.77	0.21	-0.74
49	9250	89.9	182.6	95	7216.62	2336.83	2337.07 S	7.08 E	2337.08	179.83	2.04	-1.68	1.16
50	9345	89.8	182.4	95	7216.87	2431.78	2431.98 S	2.94 E	2431.98	179.93	0.24	-0.11	-0.21
51	9440	92.2	182.6	95	7215.21	2526.71	2526.87 S	1.20 W	2526.87	180.03	2.54	2.53	0.21
52	9535	92.0	182.0	95	7211.73	2621.61	2621.73 S	5.01 W	2621.73	180.11	0.67	-0.21	-0.63
53	9630	91.6	181.5	95	7208.75	2716.55	2716.64 S	7.91 W	2716.65	180.17	0.67	-0.42	-0.53
54	9725	91.7	181.0	95	7206.01	2811.50	2811.57 S	9.99 W	2811.59	180.20	0.54	0.11	-0.53
55	9820	91.4	180.8	95	7203.44	2906.47	2906.53 S	11.48 W	2906.55	180.23	0.38	-0.32	-0.21
56	9915	91.7	180.4	95	7200.87	3001.43	3001.49 S	12.47 W	3001.51	180.24	0.53	0.32	-0.42
57	10010	91.4	180.7	95	7198.30	3096.40	3096.45 S	13.38 W	3096.48	180.25	0.45	-0.32	0.32
58	10105	91.1	180.3	95	7196.23	3191.37	3191.42 S	14.21 W	3191.45	180.26	0.53	-0.32	-0.42
59	10200	90.7	179.6	95	7194.74	3286.35	3286.41 S	14.13 W	3286.44	180.25	0.85	-0.42	-0.74
60	10295	91.8	180.3	95	7192.66	3381.32	3381.38 S	14.05 W	3381.41	180.24	1.37	1.16	0.74
61	10390	92.3	180.2	95	7189.27	3476.26	3476.32 S	14.46 W	3476.35	180.24	0.54	0.53	-0.11
62	10485	92.6	180.1	95	7185.21	3571.17	3571.23 S	14.71 W	3571.26	180.24	0.33	0.32	-0.11
63	10580	92.5	179.9	95	7180.98	3666.07	3666.14 S	14.71 W	3666.17	180.23	0.24	-0.11	-0.21
64	10675	92.7	179.6	95	7176.67	3760.96	3761.04 S	14.29 W	3761.07	180.22	0.38	0.21	-0.32
65	10769	92.1	180.1	94	7172.73	3854.86	3854.96 S	14.05 W	3854.98	180.21	0.83	-0.64	0.53
66	10864	91.8	180.3	95	7169.50	3949.81	3949.90 S	14.38 W	3949.93	180.21	0.38	-0.32	0.21
67	10959	92.7	180.3	95	7165.77	4044.73	4044.83 S	14.88 W	4044.85	180.21	0.95	0.95	0.00
68	11053	91.9	181.2	94	7162.00	4138.65	4138.74 S	16.11 W	4138.77	180.22	1.28	-0.85	0.96
69	11149	92.1	181.2	96	7158.65	4234.59	4234.66 S	18.12 W	4234.70	180.25	0.21	0.21	0.00
70	11244	91.9	181.1	95	7155.33	4329.53	4329.58 S	20.02 W	4329.63	180.26	0.24	-0.21	-0.11
71	11339	91.6	181.8	95	7152.43	4424.47	4424.51 S	22.42 W	4424.57	180.29	0.80	-0.32	0.74
72	11433	89.2	181.6	94	7151.77	4518.45	4518.46 S	25.21 W	4518.53	180.32	2.56	-2.55	-0.21
73	11525	89.2	181.2	92	7153.06	4610.43	4610.42 S	27.46 W	4610.50	180.34	0.43	0.00	-0.43
Proj	11580	89.2	181.2	55	7153.83	4665.42	4665.40 S	28.61 W	4665.49	180.35	0.00	0.00	0.00